THE BEST SELLING MAGAZINE FOR THE
AMSTRAD PCW

ISSUE 30 • MARCH 1989 • £1.50

8000 PLUS

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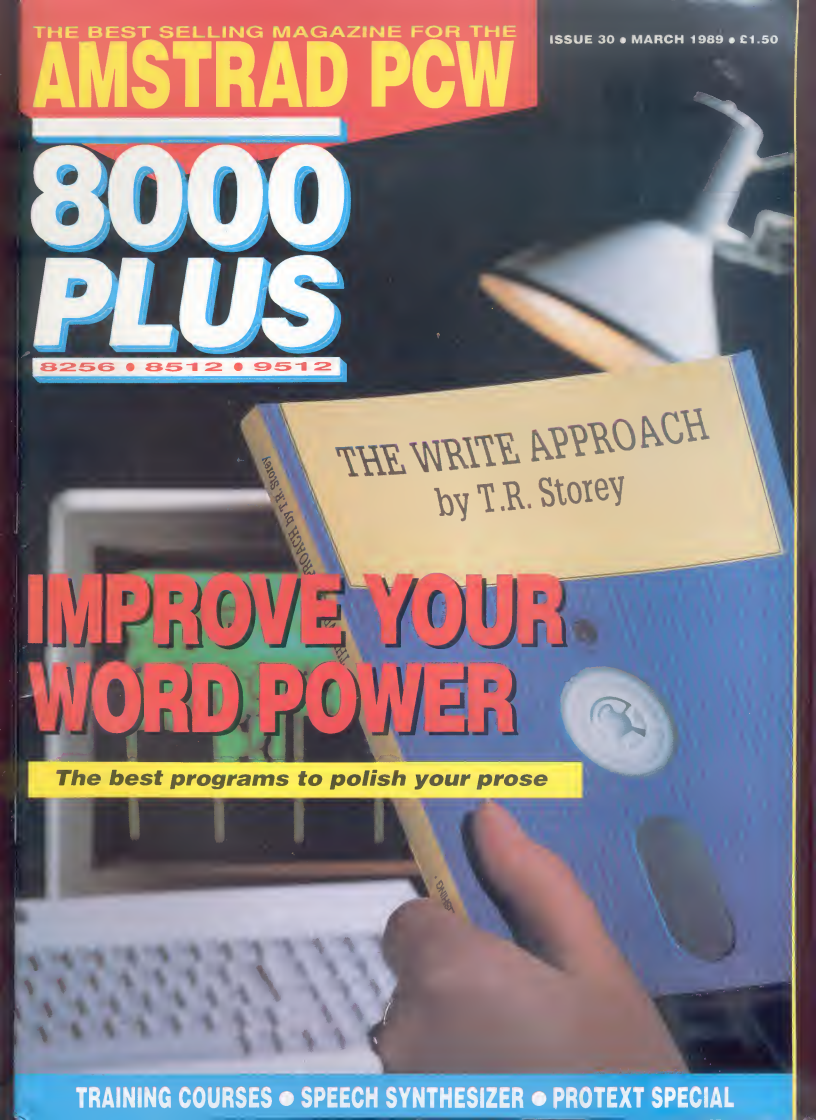

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cp software

NEW

CLOCK CHESS 89

CLOCK CHESS 89 is the **strongest** and **most versatile** chess program yet for your PCW computer. It has the most advanced 3D graphics, the widest range of options, the power to play incredibly fast and the intelligence to selectively search deep into the position. CLOCK CHESS 89 has been tested against a wide range of other chess programs and has shown itself to be stronger than any of them.

Written using the latest techniques CLOCK CHESS 89 does not use the usual "brute force" method of searching for the best move, but instead is packed with chess knowledge which uniquely allows it to search only those moves which are "sensible" or "interesting" and not to waste time analysing lines of play which it regards as "trivial". In addition, it has a variable search depth which results in a deeper search of active lines, thus reaching those parts that other chess programs cannot.

- Now with added strategic knowledge to give an extra edge
- massive 44,000 byte, user extendable, openings library
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- annihilates other PCW chess programs
- largest range of options, cursor controlled for easy move input
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- perfect understanding of all the rules of chess including underpromotion, draw by repetition and the fifty move rule
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- makes full use of the extra memory of the 256K and 512K PCW

"CLOCK CHESS is a lively and interesting opponent. An aggressive program that keeps you on your toes .... It dices up Colossus Chess nicely" Mike Basman, UK Chess Champion.

CLOCK CHESS 89 IS COMPATIBLE WITH ALL PCWs £19.95

NEW

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80+ NEW BASIC KEYWORDS AND 100% PCW COMPATIBILITY, THE ULTIMATE PCW MALLARD BASIC EXTENSION.

First ever program able to trap Mallard Basic's command list. Produces devastating graphical output with fast smooth sprites for the games programmer and icons for more professional software. We guarantee you will astound yourself with your capacity for creativity using this amazing software.

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- full A4 screen dump to dot matrix printer
- timer, sound routines etc. etc.
- easy cursor and printer control
- all functions use simple-to-use BASIC keywords
- masses of demonstration programs supplied on disc

knocks spots off other basics !

LIGHTNING BASIC IS COMPATIBLE WITH ALL PCWs £24.95

NEW

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Z80 to 68000 Source Code X-Translator for ATARI ST on 3.5" disc.

Are you an assembler language programmer ?
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BACKGAMMON - *" good implementation of the game, uses the doubling cube properly, good graphics* " - 8000 PLUS

DRAUGHTS *" extremely strong play, 3D graphics are pleasant to use* " - 8000 PLUS

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CLASSIC GAMES 4 - *Special Edition* £19.95

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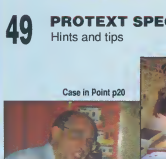
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The best PCW software from Arnor

Word Processing

PROTEXT Word Processor £59.95

Protext is now firmly established as the alternative to Locoscript.

All the features you would expect from a good word processor - many text editing commands, print commands, spell checking and mail-merging. The refinement and thought that has been put into the program - logical keystrokes and commands, clear layout, speed and power ... all go towards making Protext ideal for the novice or the experienced user.

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* Box manipulation * Configuration * Personal dictionaries *
* Exec files * Two file editing * Keyboard macros * File conversion *
* Comprehensive Find & Replace * Foreign languages and accents *
* Program editing mode * Proportional printing, right justified *
* Conditional printing and loop constructs * Print any number of copies
* Works with any printer * Calculator * Print labels *
* Use the maths/string functions to produce personalised invoices etc *
* Compatible with PCW 9512 * Enhanced spelling checker - larger dictionaries, dictionary on drive M or on program disc *
* Many improvements based on customer feedback *

"Protext deserves to be the system by which all other word processors are judged ... a superb product." YOUR COMPUTER

"The great strength of this package is its ease of use" CWTA

"Protext is the solution to all Locoscript's drawbacks" PCW

"Makes Locoscript look like a snail" 8000 PLUS

"Simply the best word processing program to date for the PCW ... Locoscript is effectively dead" PUTTING YOUR AMSTRAD TO WORK

PROTEXT FILER £24.95

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* Find words and anagrams - ideal for crosswords *
* Compatible with PCW 9512 * Dictionary on any disc/drive incl. M *

"Fast, efficient, easy to use" YOUR COMPUTER

"Anyone looking for a spelling checker need look no further" AU

POCKET PROTEXT £29.95

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CP/M Programming

BCPL £24.95

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"Easy to use, yet both flexible and powerful" CWTA

"Arnor's clear, concise manual will have you programming confidently very rapidly" AMSTRAD ACTION

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Complete C development system now available at new low price

- Optimising compiler - Full implementation of K&R standard -
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- Macros - Linker accepts C and assembler (with Maxam II)
- Stand alone generator produces COM files

* Protext compatible editor: * - Fast and easy to use - Two file editing -
- On screen help - Fully configurable - Powerful find and replace -
- Keyboard macros - Exec files - Compile directly from editor -

"Streets ahead in terms of programming power" AMSTRAD ACTION

"In typical Arnor fashion, they've taken their time and got it right" AMSTRAD COMPUTER USER

MAXAM II £49.95

Complete CP/M machine code development system at new low price

* Macro assembler * nested conditional assembly * file inclusion *
* textual substitution of macro parameters * repeat loops *
* Full expression evaluation * Error listing to screen/file/printer *
* 8080 mode * Linking facility * Create object files for use with C *

Window based monitor, with:

* line assembler * disassembler * memory editor * find string * relocate
* move memory * compare memory * fill memory * bank switching *
* symbolic debugger * single stepping * set memory limits for stepping
* stack checking * conditional breakpoints * trace mode * edit registers
* Editor is program mode of Protext (as for C, above) *

"Maxam II - now the best gets even better" CWTA CPC

"Maxam II is stunning ... the most complete and competent programming package around. Simple, speedy and sophisticated" AMSTRAD ACTION

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Protext	£59.95	Prospell	£29.95
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Protext Filer	£24.95	C	£49.95
Protext Office	£34.95	Maxam II and C	£69.95
Protext Tutorial disc	£7.00	BCPL	£24.95
		Prowort (German Protext)	£59.95

All programs work on Amstrad PCW8256/8512, PCW9512, CPC6128
Orders normally despatched on the same day they are received.

Protext is also available at £99.95 for IBM PC,XT,AT,PS/2 and compatibles, Atari ST and Commodore Amiga, and requires a minimum of 512K RAM.

Releasing your Amstrad's potential ...

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All prices include VAT, postage and packing. Access/Visa/Cheque/Postal Order.

PLAYING THE GAME

The search for a new full time editor goes on, but as you can see, 8000 Plus goes on too. In fact by the time you read these words, they will already be out of date and the new editor safely installed in the comfy chair before the cheerful glow of his trusty 9512.

But 8000 Plus is bigger than any one member of its staff; we're a team. The old saw has it that no one is indispensable and although we sometimes like to believe differently, in real life we accept the necessity for teamwork as unthinkingly as we accept the air we breath. We only really notice it when it's not there any more.

In fact many of the things we take for granted in life seem to have a life of their own. The local supermarket might employ different people from one year to the next but it still continues to offer the same products, at the same times, whoever is actually working there. The postal service, which we blithely assume will deliver our letters every day, thrives off a massive team effort; when that stopped functioning for a spell last year, the whole country felt the repercussions.

When the PCW 8256 first appeared it was a revolutionary concept, a complete home word processing system. Moreover, it offered a standard business operating system that would allow you to expand your horizons way beyond the originally intended use. It was, as the Amstrad adverts so cleverly pointed out, more than a word processor for less than a typewriter.

The birth of the PCW was a team effort, a combination of Amstrad's marketing skills, MEJ Electronics' technical know-how, and Locomotive's programming expertise. However much the name of Alan Sugar is synonymous with the success of Amstrad the reality is that he is as dependant on collective efforts as any supermarket, and any magazine.

8000 Plus is a success not as a result of the efforts of any one person but because everyone working on it works as part of a team. Because we're a strong and committed team, the disappearance of one member to the dizzy heights of our sister weekly result in no more than the rest of us shouldering a little bit more of the work. And of course we aren't forgetting you.

If not for you and the input we get from you we couldn't do the job half as well. You're on the team too; and we're delighted to have you along.

Steve Bated Sharon Bradley.

8000 PLUS

8000 Plus The far from foolish April issue will be on those newsagents shelves on March 23. Very soon after that they will all be off again, sold. Order your copy now to avoid disappointment

Hack of all Trades?

We like to think of ourselves as being fairly expert here on 8000 Plus but a few of our readers seem to regard our knowledge as all - encompassing.

The actual name and address of this correspondent has been deleted to spare his (or her) blushes but let this be a lesson to the rest of you - we may not be so understanding in the future.

Normally we will answer - or do our best to answer - any questions submitted in writing with an SAE on the subject of PCW hardware and software although we reserve the right to put them in Postscript instead. We aren't quite so keen on answering questions on the phone.

No questions relating to the Marmite and the three yaks will be answered or anything on the subject of rubberwear.

31st January,1989

Dear Sirs,

I am considering buying a new PC set and PCW and would be grateful if you could help me with some questions.

I have already purchased the Starwriter 'I' next from the PCW magazine and my specifications are as follows -

My specifications are as follows -

PC - Vtech Pentagon
RAM - 640 with twin-port (What do Ram 0 and Ram 1 mean)
HDD - 30Mb with twin-port (What do Hdd 0 and Hdd 1 mean)
Mouse - Yes
Modem - Yes, capable of 2400 baud.
Cost - to the nearest Pound.
Software - Pentagon-Picture and WCAM2.

I would also like to have Pictor-Picture and WCAM2 both of which I have already purchased, however, the programmers remote control facility is not very well with -

Starwriter 'I' to control WCAM2.
Pictor to control Vtech.

Would you please tell me which models you would recommend and their price.

Forgotten it again section

The phone number of Transprint Communications inexplicably disappeared from the article on typesetting; it is (0225) 478725.

We also forgot to credit the artist who drew the Febuary cover (wasn't it good?). The man concerned is Nick Davies and he can be contacted on 01 624 8919.

Twixt PCW and paper

The extraordinary Spirographics program stirred up a lot of interest in Basic type-ins last month. Unfortunately, as with most things, when something won't go right the first item reached for is the telephone and the last one is the manual.

In line 500 there is an up arrow which unfortunately only prints out as a circumflex (a little upside down v). Now, the up arrow is the exponential symbol in Basic and the circumflex isn't used at all. The up arrow is obtained by pressing [EXTRA] + u while the circumflex cannot be obtained on its own – so why the confusion? Very strange.

Noisy winners

There were an enormous number of entries for the Noise Competition, sponsored by Isenstein; 8000 Plus readers clearly prefer a quiet life. Following in a tradition handed down through the years these were ceremoniously tipped into the waste bin, stirred thoroughly, and the winners pulled out again.

Three who get the printer hoods are:
Natasche Weisenthal of Sunningdale, Berks; C D Ball of Sheffield, and D A Thomas of Harlow, Essex.

Winners of the battery backpacks are Martin Edwards of Rowena Crescent, London; Mrs J Pike of Bilton, Nr Rugby, and Elaine Hill of Whimsey Park, Carlton, Nottingham.

By the time you read this the goodies should be winging their way from Isenstein to you; and in case you were wondering the answers are b, a, c, b, a, c.

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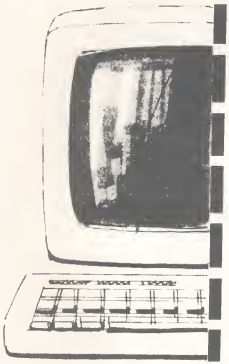

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A Message from Amstrad's Chairman.....

Dear Amstrad Computer User,

You don't need me to remind you that you have selected the best computer in its price range. Numerous journalists from specialist press have now contributed to the opinion that Amstrad computers represent the best all round machine you can buy.

One of the many reasons why computer journalists have received our products so enthusiastically is undoubtedly our careful attention to providing information on the system and its software.

You can be part of Amstrad's ongoing effort to inform and help users by taking advantage of this opprotunity to join the User Club . Catering only for the Amstrad computer user, this specialist support club was initially formed by Amstrad solely for the purpose of assisting you with all your computer needs.

There are many immediate and direct benefits available, so don't delay before filling out the application form below and sending it back to Amsoft.

Yours sincerely,

Alan Sugar
Chairman AMSTRAD Plc

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NEWS

Ballooning interest

Some people will go to any lengths to court publicity, but Star Micronics have applied lateral thinking to the problem and gone for heights.

The next time the name Star makes the news in a big way will be when Pers Linstrand (of Richard Branson 'Look At Me I'm Flying Across the Atlantic' fame) attempts to take a balloon over Everest.

There is not the slightest doubt that the said balloon will have Star Micronics (Look At Us, We're Flying Over Everest) written on the side though somehow it seems unlikely that there will be any directors of that company up there with the fearless Linstrand.

All this is in aid of raising public awareness of the Starcomputer printer line – as they explained at the press launch at the beginning of February (nothing to do with the actual balloon launch which will be sometime in September or October depending on the weather). ■

Digita pays off

The extremely enthusiastic Jeremy Rhyll of Digita International has recently launched two new packages aimed at the small to medium business.

Government requirements have made payroll calculation one of the most complex and time-consuming parts of business administration. Every business needs to calculate payrolls but the software required to computerise the process rarely manages the whole job.

If you're finding calculating payrolls a chore (and surely no one does it for fun) then DG Payroll or DG Payroll Plus may be the answer you're looking for. 8000 Plus will be carrying a complete review of these two packages in the April issue.

DG Payroll and DG Payroll Plus cost £39.95 and £79.95. respectively. Phone 0395 270273 for further details. ■

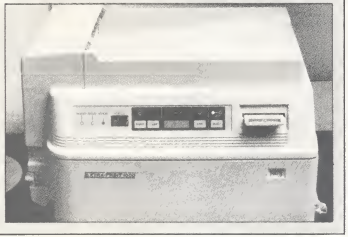
Fast as light

For the very best in fast, silent printing there is nothing to beat the new laser printers – but all that power comes at a high price; often an outrageous one.

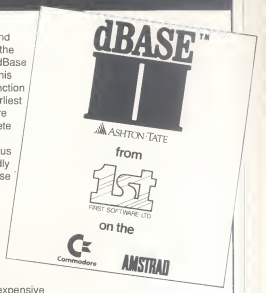
The latest laserprinter to attack the budget end of the market is the somwhat unimaginatively named Extraprint 1000 from the Satcom Corporation (UK) Plc.

The Extraprint 1000 boasts sealed consumable units to eliminate messy toner changes and five built-in emulations including Epson FX-80 and Diablo 630.

The starting price is £1595 which really is cheap for a laser printer even if it will buy three PCWs.■



Playing hard to get



Perhaps the earliest relational database, and certainly the one with the best known name, is dBase II from Ashton Tate. This program had the distinction of being one of the earliest pieces of 'soft' software and included a complete dedicated database language. It was famous for being very unfriendly – largely because in use all it showed was a single dot on the screen.

In fact it was, and still remains, one of the most useful programs for building applications under CP/M but is just a bit expensive at around £295.

Recently Ashton Tate reduced the price to £99 which you might think good news, unfortunately, if the lower price seems tempting and you want a copy you could find it just a shade difficult to get hold of.

We are told that First Software, who apparently were distributing it, are now being sued by Ashton Tate. When we phoned to enquire about the availability of dBase II for CP/M, an Ashton Tate representative asked if it was IBM compatible; if it wasn't then she couldn't help.

Xitan Software (0703 871211), who it seems are now the approved distributor, told us that the situation was under review and that at the new low price they didn't think it would be worth their while to continue supporting the package. Any further information on this subject would be welcome. ■

FT isn't DB anymore

If your way of working just doesn't fit well with the restrictions imposed by a traditional database then you've probably looked at FT=DB, a program that allows you to take your normal messy text file and use it as a database.

A free form database is a Good Thing, as we've mentioned before, so an improved free form database must be a better thing.

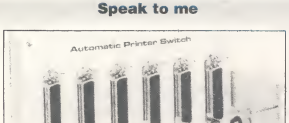
Encyclasoft have released an updated version of FT=DB and called it Script2Base (note the number in the middle of the word and the errant capital letter – all sure signs of a winner in the software stakes).

This improved database works directly with LocoScript 2 documents thus eliminating the Make Ascii phase involved in using FT=DB. It also uses the same keystrokes and similar menus to LocoScript 2.

Encyclasoft favour using Flipper (from Software Imperative) with Script2Base and have come to an arrangement with that company to supply both programs at a reduced price.

Encyclasoft claim that they will soon have a Protext version of their program available for sale. Script2Base (for users of LocoScript 2 only) is £24.95 on its own or £49.95 with Flipper. Further details on 0270 811890.■

Speak to me



If you've bought an expensive printer or laser for an office full of PCWs how can you give them all access to it without constantly unplugging it from one and connecting it up to another – with all the attendant risk of damaging the sockets in the process?

The problem is most neatly solved with a multi way printer switch. Knighthawk Electronics are now selling six into one switch boxes allowing several users to share a single printer.

For full details of Knighthawks range of switches and uninterruptible power supplies call 0799 40881 ■

Daylight robbery

You may think you know how to use the lack of security in some computer systems to make money but IBC Technical Services are way ahead of you and their method doesn't even break the law.

On the 13/14 April they are holding a seminar on Electronic Risks in Banking and Commerce – the forth time they've pulled this particular scam according to their press release.

They will examine more than twenty cases of computer crime and attempt to show delegates how they can identify computer crime risks in their own business.

The price of learning how to avoid computer crime? A very reasonable £685 plus VAT – and you don't even get bed and breakfast thrown in. ■

Dot, dot, dot ...

Is the new printer from Epson a solution looking for a problem? The TLQ4800 is the first 48 pin dot matrix printer to come to market and will be available from the beginning of March.

A wide carriage machine that can handle cut sheet and continuous paper simultaneously the new printer uses a special film ribbon which is supplied as standard to give a resolution oi 360 x 360 dpi (dots per inch).

This high resolution compares very favourably with laser printers, most of which offer 300 dpi – however, lasers give sharper corners to letters and graphics since they can produce smaller dots than a dot matrix. The printer has ten built in type styles and works at 100 cps in NLQ and 300 cps in draft.

Then of course there is price. The TLQ4800 will initially retail at £2199 for the basic machine with further features available as options.

For more details telephone Epson on 0442 61144. ■

Designer desks

Owning the right computer is no longer enough: you need special furniture to put it on. It's the age of the workstation.

Of course computers take up a lot of desk space and it doesn't stop there. Before you know it there are loads of 'extras' to consider: hard disc drives and printers, modems and disc boxes. Worse still – and contrary to popular belief – computers generate paper like a dog breeds fleas.

To take the heavy weights, the hard knocks and provide for the computer users' special needs MicroComputer Accesories are launching a range of modular computer desks and all the extra goodies that help make things run smoothly

There are integral cable runs and optional paper trays, monitor stands, copy holders and printer stands, for example. For further information and prices phone 0734 320332.

Personal Organiser

A company called Organisers have recently launched what is possibly the most robust workstation for the PCW. It weighs in at 45 lbs and is guaranteed to out last not only your PCW but probably you as well.

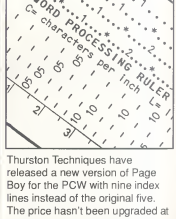
It's constructed of very strong metal sections welded together. Two separate shelves have been fixed to accommodate keyboard, monitor and printer.

The manufacturers assure us that it has been designed with the user's comfort uppermost in their mind.

The standard colour scheme is a black frame with white shelves although you may be able to negotiate a different combination. It's usually delivered as a flatpack but we are reliably informed that it will take only 15 minutes for the most incompetent DIYist to assemble.

This workstation costs £79.50 all inclusive. Phone Organisers on 0902338423 for further details.

A better boy



Thurston Techniques have released a new version of Page Boy for the PCW with nine index lines instead of the original five. The price hasn't been upgraded at all and remains at £2.45 all inclusive. Phone (0395) 277496 to find out more. ■

Redoubled efforts

Were you fired with enthusiasm by the success of the PCW computers in the home but are feeling a little lost now that the boss has decided you are the company expert?

If that sounds familiar, an NCC publication entitled Management Guide to Choosing and Implementing Computer Systems by A F Robb might help. Now out in paperback it costs £30 from the National Computing Centre. Call 061 228 6333 for further details. ■

LocoScript & LocoSpell

THE BETTER FASTER WORD PROCESSOR FOR YOUR PCW

LOCOSCRIPT 2 GIVES YOU :

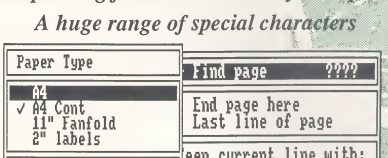
Faster movement through your documents

Move direct to a given page

Better word processing facilities — operated more simply

Unparalleled printing facilities — in every European language

A huge range of special characters



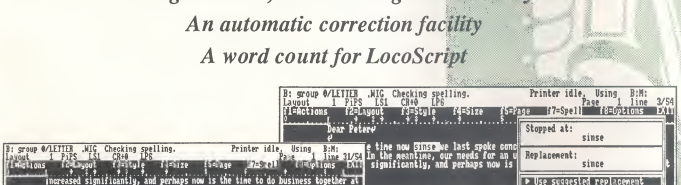
LOCOSPELL OFFERS :

Spelling checker within LocoScript

Longman's 78,000 word English dictionary

An automatic correction facility

A word count for LocoScript



TOGETHER LOCOSCRIPT 2 AND LOCOSPELL MAKE YOUR PCW MUCH BETTER – BUT THAT'S NOT ALL...

The Write Stuff

A poor workman blames his tools but can a writer use the same excuse?

The PCW could be described as the Model T Ford of business computers. Just as the Model T brought affordable motoring to the majority so the PCW has brought affordable business computing.

The affordable car made short work of long journeys and the PCW, designed as a word processor, generally makes short work of handling words, but, at times, it needs something extra to make it really go, it needs 'bolt-on' software.

Owning a PCW isn't going to make you a writer any more than owning a set of spanners will make you a mechanic, but it has become one of the standard tools of the writing profession. Since the PCW came literally as a 'plug in and go' word processing system it proved easy for those with no technical inclination to make the transition from typewriter to computer. Many people did (and still do) treat it as no more than a glass typewriter on which they can do instant corrections.

The fact that it can be treated this way is a tribute to the designers of both the hardware and software, but particularly to Locomotive's LocoScript software. This interacts so seamlessly with the actual computer hardware that many users remain unaware that they aren't part and parcel of the same thing, to them the PCW is LocoScript.

So, with the system being complete and relatively friendly (as computer systems go) why change anything? Oddly enough it's those people who bought the PCW primarily because they were writers who began to hit its limits first; LocoScript 1 proved so slow scrolling through long documents that those using it began to suspect that it had died on the way.

Other problems slowly began to manifest themselves as time wore on; the very slow block moves for example, and the lack of support for other printers were serious deficiencies, as was the total lack of compatibility with any other word processing system – early versions of LocoScript couldn't even produce an ASCII file. Still, you have to remember that Locomotive's brief from Amstrad was to produce a piece of software you could write a letter with. Considering the brief, LocoScript 1 was a marvellous product.

Filling the gap

There were other word processors in use on CP/M systems (LocoScript itself runs under a modified version of CP/M) when the PCW first hit the streets. The most potent and, probably, the best of these was WordStar. As a progam WordStar had the advantage of being the first full screen word processor available for desk top machines and thus became the de facto standard in the business world.

For this reason, almost all text editors and word

processors (other than LocoScript, naturally) offer a subset of the WordStar commands as an alternative to whatever else they provide – it was essential if they hoped to be considered for use by WordStar trained secretaries. WordStar was thus one of the first alternative word processors to appear on the PCW.

Micropro, who wrote WordStar, were in for a disappointment though. LocoScript had been written for ease of use, WordStar hadn't; not only that, but you had to pay money for it and the advantages over LocoScript weren't at all obvious. The fact is that WordStar on the PCW isn't much faster than LocoScript. Few people bought it unless they were familiar with it already.

Not to be discouraged, Micropro updated WordStar and there is now WordStar version 4 available which includes such goodies as indexing, unerase and multiline headers and footers. This version is supposed to be much faster than previous ones; it's also much bigger and much more expensive.

But the fact remained that people who had been happy to wait a fortnight for their typist to return corrected copy were irritated by the two minutes LocoScript took to do the same. There was a definite need for a better, or at least faster, word processor, and if WordStar wasn't to fit the bill, which one would?

Tasword came – and went. It's cheap but has little else going for it. Almost every text operation takes four seconds – fast from one end to the other but slow from one page to the next. The command structure makes WordStar look intuitive, but there's no proper insert mode and worse than that, it fails to format documents reliably. And, last but not least, the only way to quit is to turn the machine off. Many copies were sold but few are used.

Is it a bard?

Superwriter arrived, but wasn't anywhere as good as its name implied. Supplied for an 80 by 25 character screen rather than the PCW's 90 by 32 screen and unable to use the special keys of the PCW keyboard, there were too many things wrong. In the face of growing problems Sorcim rapidly withdrew it from the market. Writers were left still waiting for a good fast word processor – a writing tool as efficient for use on a computer as the biro is on paper.

It eventually arrived from Arnor in the guise of Protext, which at last provided those involved in churning out copious amounts of text with a fast and flexible friend.

Mini Office is faster than LocoScript though much slower than Protext. It does have a very useful word count feature, however, and can handle fairly complex layouts, multiple blocks and most of the usual word processing requirements. One big point in favour of Mini Office is the solution adopted for footnotes. It always keeps them with the text to which they refer despite reformatting. It is also very nearly free.

In use Mini Office has a fragile, tacky, feel, as if it might fall over at any moment, though to be fair it rarely does. The screen is very cluttered though some writers like a busy screen to protect them from the 'empty white sheet of paper' syndrome.

Seeing it as it is

Mini Office has an unfortunate tendency to grab your M drive for itself which means multiple file editing has to be done from disc. It lacks many of the useful utilities and facilities of Protext – like the exec commands, fast file handling from the command line and phrases. It also fails to make up for this by protecting the user from the mechanics of the computer in the way that LocoScript does.

This is a good place to think about the kind of writers who had been looking for a different word processor. One thing they had in common was the need to produce longish documents, more than 1000 words or so, and alter them frequently.

This group could include journalists, feature writers, novelists, writers of technical reports, playwrights, technical authors and those who write long letters to the newspapers complaining about the number of Martians in Parliament.

For the professional writer words are his product – what he sells to buy shoes for the children. And while no (reasonable) writer would blame poor software for his rejection slips better software can make the writing process easier by not getting in the way.

Saying it with style

Locoscript users who are too busy writing to take the time necessary to construct layouts can buy hundreds of them ready designed and waiting to go. Tempdisc, from Thurston Techniques, includes templates for everything from letterheads to shipping documents, company reports to seasonal greetings. Almost any form that ever needed to be filled in is on here somewhere.

Original flavour hacks

Many journalists now work on PCWs, but still have to take notes and get copy in. For them communications software can be more than an interest and actually make them money. Finished articles can be sent over the phonelines via E-mail using a variety of comms software. For simple text almost any software that will send an ASCII file is suitable.

In fact even MAIL232.COM on the LocoScript disc will do the job. For error checking – which guarantees no corruption in transit – something like Dialcom or Chit-Chat would be better. So now there is no excuse for not getting copy in on time.

We practise what we preach. All of the 8000 plus editorial is prepared on PCW machines using Protext

Spelly good

If creative writing is your business then a good, fast, word processor is probably all the software you'll ever need, apart from a spell checker of course. You can already spell? Good. But one of the main uses of a spell checker is to pick up typing errors. You may know that it is better to 'receive' than to 'recieve' but how often have you typed 'adn' and failed to spot it because you only look at the difficult words when going through your work?

Spell checkers are fairly stupid (all right, very stupid) as the recent spate of correspondence on LocoSpell suggestions makes clear, but the apparent IQ depends on the number of words in the dictionary; the more the better.

Of course some of the words you use won't be there so spell checkers usually have the facility to either add words to the dictionary or create a new one, generally called a user dictionary. This is important for technical writers who may use exotic engineering or medical terms.

The only spelling checker that works inside LocoScript is LocoSpell, and though extremely thorough it is rather slow. You probably only have to do this once on the finished document so that may not matter, it depends on the number of finished documents you produce. Clearly spell checking a document every six months won't be so onerous as checking short articles every day.

Under CP/M there are several spelling checkers, the best of which is probably Prospell, from Arnor, which can put you right at up to 2000 words per minute and works with LocoScript, WordStar or ASCII files as well as Protext's own. There is also a spelling checker available for WordStar called, oddly enough, SpellStar. If you bought WordStar Deluxe then you got this anyway but if not an upgrade can be bought for £25 from Davis Rubin Associates.

Newword, the WordStar clone, comes complete with it's own spellchecker, also available separately from Newstar. In fact even Tasword has a spelling checker available called Tasspell which will work with ASCII files, though with only 20,000 words in the dictionary and checking at around 200 words per minute it isn't going to be first choice.

Technical problems

Perhaps you write in a foreign language, or a mixture of English and some other language; you might need Greek for classical references or Norwegian for Norwegian references; what choices do you have when it comes to a word processor? None.

Only LocoScript includes access to complete foreign alphabets. These include Greek, Cyrillic, various Scandinavian, Spanish, Italian and German characters. No other word processor can begin to compete. More than that, with the Locomotive keyboard disc the keyboard itself can be configured to act as if it were any European keyboard yet still retain access to the Greek and Cyrillic character sets. Ideal for foreign correspondents.

There are also those who need to write equations, they might be mathematicians, engineers or geologists. This represents the hardest problem for any word processing package, not least because their symbols often need to bridge more than one line.

Unfortunately there is no complete solution, though again LocoScript comes closest. This is largely due to its Greek character sets and ability to keep track of line length for printing when using super and subscripts in a line with other character sizes. But even users of machines with considerably more power than the PCW are often unable to solve this one completely. It will remain a problem just so long as word processors are line based. Sorry.

He did it my way

Technical authors and report writers often have to comply with very precise instructions as to the way material can be laid out on the page. For this kind of work it isn't enough to have all the information in there somewhere, it has to be written up and printed out in a particular format. For those who have to read instruction manuals or extract information from endless reports, having a standard layout reduces the amount of work the reader has to do to understand what he or she is looking at.

You might think LocoScript would be ideal with its very good control over layouts via templates, but not so. Technical writing tends to be extremely modular, involving a lot of block moves, merging files and saving blocks as files for later use. Protext is by far the best for that kind of work.

However, technical authors also need to produce indexes, an extremely specialised task that can be somewhat harder than it looks. In fact so important is the process, as anyone who ever struggled with an unindexed

Automatic writing

A mail merge program can do a lot more for you than generating invoices, a good thing if you have no sales yet. A good mailmerge program is a complete dedicated programming language in its own right.

LocoMail, with LocoScript, can do much more than handle business letters, for example it can automatically number paragraphs or sections of text on printout.

Protext's built in exec commands and mailmerge facilities are even more powerful, being able to handle many of the functions of Basic. In fact it is possible to write powerful programs inside Protext. These can be used, for example, by solicitors for tables of attributes or the numbering of speeches in a script. In fact there are very few text related tasks that Protext couldn't be made to perform.

Mini Office supports mailmerge but is far more limited in use than either of the above. The Mini Office word processor can use a data file to perform simple merging tasks like adding names and addresses to form letters. Of course, this might be all you need.

LocoFile & LocoMail

ADD A DATABASE, MAILMERGE & ARITHMETIC TO YOUR PCW

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A pop-up card index within LocoScript 2

Data sorted in alphabetic, numeric or date order

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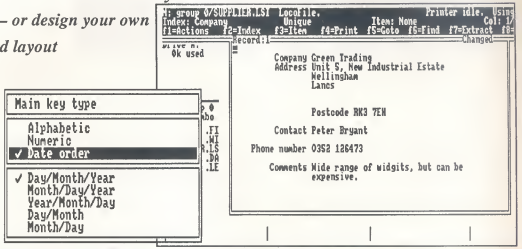


LOCOMAIL GIVES YOU :

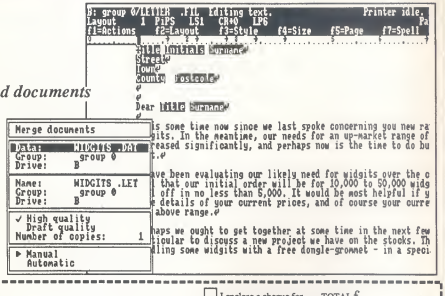
Automatic mailing from LocoFile data files or from LocoScript files

Arithmetic within LocoScript 2

Selective mailshots

Address labels straight from a datafile

Programming features for sophisticated documents



To Katy Buchan:
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Protext processor

Protext is no harder to use than LocoScript and possibly even easier once the commands become familiar. Writers are prepared to learn it because it is a better tool for their purposes.

Part of the speed is achieved by using a command line rather than a menu system and the rest by including very little formatting information in the text (in fact almost none).

Certain people at Locomotive have been known to denigrate Protext as a jumped up text editor, but anyone who has worked with a good text editor would probably take that as a recommendation.

Protext clearly shows its origins in the speed with which it moves through a document and the casual ease with which it marks, copies, transfers and deletes blocks. It can even edit two files at once and move blocks from one to the other. The price you pay for this speed is the difficulty involved in producing a document with a complex structure, in fact there are professional writers who prepare text in Protext and shape it in Locoscript for printing.

Although protext began life as a very fast program editor on the Amstrad CPC machine it has come a long way since then and can now boast an enormous amount of features to increase both speed and efficiency in the handling of words. Even better since it's available for the PC, Atari ST and Amiga it can provide file compatability across a wide range of computers.

What does this say?

Many successful novelists only ever write on paper by hand. Some speak of the mystical act of manually creating the prose on the page. They include Jeffrey Archer, James Herbert and Jackie Collins. Some go even further, for instance Barbara Cartland dictates her novels. Perhaps they simply can't type?

Where's the k gone?

One piece of software often overlooked in the rush to get into print is a typing tutor. You may think it doesn't matter that you can't type properly, but if you're thinking about where the keys are then you aren't thinking about the words.

The long and the short of it

The great majority of those who produce short documents work in business and are turning out, letters, orders, invoices, quotes, memos, threatening letters to creditors and similar short missives. One thing these have in common is that they are generally highly structured documents. Locoscript is ideal for producing and printing these kinds of documents and there would seem little point in using anything else.

or badly indexed manual will know, that there is actually an organisation representing professional indexers that sets standards.

The guide by your side

The only word processing software with built-in indexing facilities is the CP/M version of WordStar 4, a good second choice for working on technical reports since its block handling facilities are very good (not as good as Protext though) and it is fast.

Ansible software produce a standalone index generator called AnsibleIndex that works with LocoScript files, though it doesn't work from within LocoScript. Words that you want included have to be marked by highlighting them during editing.

AnsibleIndex is quite intelligent, for instance multiple use of the word on one page will only produce one entry in the index while entries on other pages will be merged, giving a list. Unfortunately it isn't possible to automatically generate an index on a general topic, there has to be a specific reference (you can't tell the program to put an entry in under Gastropod every time snails or France is mentioned).

Once the index is generated you can merge it back into a LocoScript template and add or delete items but remember, the numbers you've generated won't be the same as those in the final book (though they might be the same as those in a report).

For those reluctant to go back to LocoScript to produce an index after familiarising themselves with Protext another possibility is FT=DB, ostensibly a free form database. FT=DB will take a text file with the words you want indexed marked up with ordinary ASCII characters and produce an index from it. It will also be able to extract information from the file at a later date, treating it as a database, which can prove useful. This is a simple way to get an index from a non LocoScript file.

One other possibility is Indexer from Comma Software, now much improved over the original release boasting new documentation and the ability to work with both Protext and LocoScript files.

Nota bene

Brainstorm, by Brainstorm Software, is a program which can help both technical writers and creative writers alike, though for different reasons. This is essentially a simple word processor in which you can't see the words; at any one time most of them are hidden from you. This may seem a strange way to go about things but it can prove illuminating.

Called an 'ideas processor' Brainstorm allows you to note down a few general thoughts on a subject and then expand each of those ideas without either the other ideas or any other text intruding. Like a tree with many branches each offshoot leads to others until the end of the twig is reached.

When you've explored the idea as deeply as you wish, then the results of your labours can be processed into a standard file and tidied up with a word processor.

The way you work in an ideas processor is to move from lower branches to higher ones and vice versa, moving through a herarchy of ideas rather than through linear text. For anyone who needs to produce outlines, multilayered plots or analytical reports (and currently ends up with lots of notes on odd pieces of paper) an ideas processor could be the software tool you've been looking for.

In fact no matter what kind of writing you do there is a piece of software that can increase your effectiveness. Your word processor will always be the most important software you run but it needn't be the only one you run. Your computer can do a lot more for you than just replace the typewriter. ■

At a glance guide

Software	Supplier	Telephone	Price
Locoscript 2	Locomotive	0306 740606	£19.95
Locospell	Locomotive	0306 740606	£19.95
Protext	Arnor	0733 239011	£59.95
Prospell	Arnor	0733 239011	£29.95
Pocket Protext	Arnor	0733 239011	£29.95
Pocket Wordstar	Davis Rubin	0386 853610	£49.95
Brainstorm	Brainstorm	0895 677845	£29.95
Ansibleindex	Ansible Information	0602 62576	£29.95
FT=DB	Encyclasoft	0270 811868	£29.95
Mini Office	Database	various	£29.95
Temp Disc	Thurston Techniques	0395 277496	£11.95
TexaTrix	Scarabeus Software	01 515 4313	£5.99
Indexer	Comma Consultants	0793 852497	£22.95

For further information on these and other products see the Good Software Guide

caspell - the PCW *specialists!*

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	1 off	2 off
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* Please state 8256/8512 or 9512

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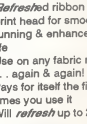

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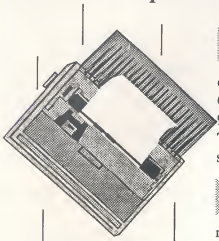
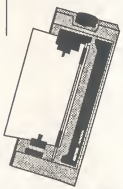
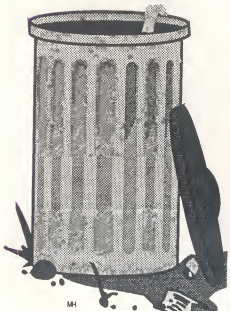
At last a high quality printer that's as flexible as LocoScript 2. With a 24 Pin Printer and the 24 Pin Printer Drivers Disc from Locomotive Software, you get really high quality printing of ALL LocoScript's characters, pitches etc – even on a PCW9512.







24 PIN PRINTERS ARE GOOD FOR 8000 OWNERS

With a PCW8256 or 8512 you can already print all of LocoScript's characters on the built-in matrix printer. With a 24 Pin Printer "High Quality" printing really will be High Quality! The built-in matrix has just 9 pins – a 24 pin printer not only has more pins, but they are closer together. This means that you get a better result. Most of these printers print in one sweep across the paper – which makes a 24 Pin Printer much faster as well.

24 PIN PRINTERS ARE GOOD FOR 9512 OWNERS TOO

The PCW9512's built-in printer gives good quality results but it is noisy and slow – and it can only produce a small range of characters. You cannot even mix upright and italic characters in the same document. A 24 Pin Printer and the 24 Pin Printer Drivers disc will give you the full range of characters (symbols, accents, Greek, even Cyrillic!), without sacrificing quality.

If you're thinking of getting a better printer, then how about a NEC P6 Plus. We think this is the best price/performance printer around and it's available from us at £549 + VAT. We'll also throw in a connecting cable and printer software FREE! Let us know if you've got an 8000 or a 9512 so we can send the right cable – and remember you'll need a CPS8256 Printer Interface if you have an 8256 or 8512. If your budget is tighter, then how about the NEC P2200 at £349 + VAT.

If you've already got a 24 pin printer (such as an Epson LQ series, NEC P2200, P6 Plus or P7 Plus..) just add the 24 Pin Printer Drivers disc. For £24.95 inc VAT you'll get more from your printer than ever before!

The 24 Pin Printer Drivers can be used with the Amstrad LQ printers. However, please note that performance is poor compared with other printers because of the way the Amstrad printers handle "downloaded characters" which are essential for the provision of the full range of LocoScript 2 characters.

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(* requires LocoScript 2)

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QUICKIES! ONTEST

Forms for all seasons: two standard document generators reviewed

TEMPDISC 8.2

£18.95 ● Thurston Techniques (0395 277496) ● 8512 only

If trudging through the LocoScript 2 manual in search of those various evasive allusions to the latest layout techniques, is a painfully familiar process then the latest version of TempDisc might provide the solution.

Like the original Tempdisc the new TempDisc 8.2 is a disc of ready-made templates to be used inside LocoScript. All you have to do is find the particular template to suit your requirements and then fill in the details.

It can be stated without fear of contradiction that there are layouts on this disc to suit any kind of occasion. Typical templates include letterheads, structures for minutes, agendas, production schedules and menus, but there are also forms for more exotic requirements like shipping documents.

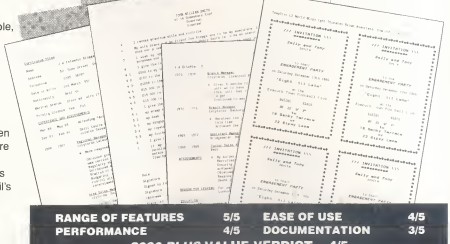
Some of them will appeal as methods of personalising your correspondence in a fun and unusual way; for example, you can create plain and bordered labels and envelopes with the correct pitches and page lengths already set, or festoon your Christmas correspondence with all sorts of festive characters. It's possible to really individualise your tickets and invitations.

The main difference between TempDisc 8.2 and the earlier version of the program is its compatibility with LocoScript 2 as opposed to LocoScript 1. Because it's been designed to run from the 8512's second disc drive there are more layouts on offer and in far greater variety.

An important new addition to TempDisc 8.2 are the files that have been set up specifically to complement LocoMail's invoicing facility. Also new to this version is the 16-month calendar option as well as the range of Christmas characters.

For those planning on changing jobs there is a Curriculum Vitae template while for those planning to die there's a last will and testament template supplied. It really does have something for everyone.

If you don't appreciate visual trimmings on your print-out, then TempDisc might seem no more than a waste of money. On the other hand, if you want to make the most of Locoscript's advanced features, but don't have time to learn them, you can still make your output look really good without ever opening the manual. ■



RANGE OF FEATURES	**5/5**	**EASE OF USE**	**4/5**
PERFORMANCE	**4/5**	**DOCUMENTATION**	**3/5**

***8000 PLUS* VALUE VERDICT 4/5**

FORMS BOX COMPENDIUM

£19.95 ● Disc Design (0522 40940) ● All PCWs

Forms Box Compendium generates over 70 different kinds of forms for office and home use and, like the original TempDisc, is fully compatible with LocoScript 1 and 2. So, not only do you not have to struggle with an unfamiliar command syntax but you can still make use of LocoScript's impressive features.

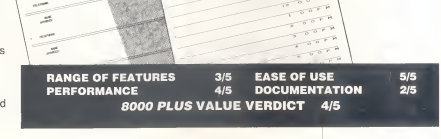
Indeed, if you're already familiar with LocoScript, this program couldn't be easier to use. All you have to do is acknowledge that there's been a disc change when you insert the system disc and away you go as normal.

The forms available on the disc vary enormously, and although they may lack the trimmings that accompany TempDisc, they are totally adequate and very clearly arranged.

There are four different kinds to choose from. The first group of forms fit into the personal organizer category and are aimed at users of the famous FiloFax and compatible systems. They include, among others, templates for name and address lists, birthday lists and letters received and sent.The second category is better suited for business users with the emphasis on standard templates for agenda minutes, invoices, job specifications, petty cash slips, progress records and salesmens' records.

The third category is purely financial whilst the fourth and final one provides the tools for organising the household. There are forms for generating home purchase logs, home hunting checklists, disc libraries and diet records, and much much more. There are even printouts for organising the contents of your wine cellar if that's what you really need.

The Forms Box Compendium may not have as many templates on offer as TempDisc, but the forms that it provides seem better distributed between home and office use. It's a solid and reliable program that does exactly what it says: it creates forms that you can either fill in on screen, save and then print out or even print them out and then fill them in. Forms Box is designed to print onto A4 size paper. Most of the forms are then suitable for edge punching and filing in ring binders – rather like a bigger than usual FiloFax. A solid, no frills product. ■



RANGE OF FEATURES	**3/5**	**EASE OF USE**	**5/5**
PERFORMANCE	**4/5**	**DOCUMENTATION**	**2/5**

***8000 PLUS* VALUE VERDICT 4/5**

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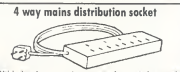

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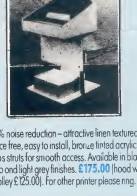

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My particular line of business is somewhat unusual: providing entertainment for childrens' parties. At a 'Magic Circle' meeting, late in '85, I casually let drop that I was thinking of buying a computer to streamline my business. This disclosure met with a few raised eyebrows. Why would a conjuror, ventriloquist and Punch and Judy man need such a contraption?

Action Replay?

The fact of the matter was I had stumbled upon a problem of which most of my colleagues seemed blissfully unaware: spin-off bookings.

One engagement very often leads to another. At any party there will be not just the birthday child whose parents have paid for my services but also twenty or so of his or her friends.

Sometimes they go home and ask their parents if the 'Magic Man' can come and perform at their next shindig. The difficulty lies in keeping tabs on which groups have seen which acts. The importance of not repeating the same tricks can't be over-stressed. Watching a magic show without surprises is as thrilling as watching a football match when you already know the score.

The plan was shelved for a couple of months because the annual spate of Christmas bookings took over. That's when a performer like me can make upto twenty-five per cent of his annual income. Demand totally outstrips supply.

That's not the way to do it

By the ensuing February the flow of engagements had returned pretty much to normal. I decided to go ahead as originally planned. It hadn't occurred to me to do any preliminary research, though. Like a lot of people, I fondly imagined I could walk into a shop, buy one, take it home, plug it in and, as if by some mystical power, it would know exactly what I wanted done and how to set about it. I simply waltzed into the nearest branch of Dixons and bought the first reasonable looking machine that I saw.

This happened to be a PCW 8256. Arriving back home I unpacked my toy and nearly had a heart attack on seeing the huge instruction manual that came with it. Here was something entirely unexpected. I should have realised that any tool is only ever as good as the person using it. This applies to dentists' drills, sewing machines and most work aids. Computers are another such item and, before they can be applied effectively, new skills must be acquired. I simply hadn't realised that there would be quite so much to learn. I knuckled down to it quite successfully though many months were to elapse before the machine would be fully up and running.

Walt Lees, conjurer and Punch and Judy man, uses his PCW to manage party bookings and to keep a record of his 'appearances'.

Pick of the Punch

It was apparent that a more logical approach must be adopted if I was going to get any real benefit. For instance, I had to find out what software was available and how it could be employed in my line of work.

When you think about it, most small businesses, including that of the magician, have three basic administrative requirements. These are:

1) Communication with customers, staff and other companies.
2) Information about customers, stock or services bought and supplied.
3) Financial accounting of transactions, wages, profits, expenses, etc.

As far as communication alone is concerned, most magicians have plenty of uses for a typewriter. Letters, confirmations or contracts all have to be written. There may also be mail shots to agents and potential clients as well as articles for magical magazines; I edit one and sometimes contribute to others. A word processor, like LocoScript, would have a big part to play in the overall scheme of things. For keeping records of customers, bookings and the like, a suitable database was required.

Then there was the matter of accounts; a field where computers really can come into their own. However, magicians, even if they are very rich (unlike me) don't have need of a complicated package. They haven't any large stock movements or staff wages unless, of course, they're running a spectacular illusion show with crowds of assistants and a sizeable menagerie. Most can be satisfied with a spreadsheet.

Now you could just buy Mini Office Professional. Then, such luxuries didn't exist.

As if by magic

LocoScript, being already to hand, was the first software package explored. It quickly demonstrated how a word processor could save lots of drudgery. Previously, I had taken the line that there was no need to spend hundreds of pounds on equipment which would only accomplish the same thing as a typewriter. Now I know better.

Word processing is so much more rapid. Tedious retyping and copious supplies of Tippex are now things of the past. Once I've written something, I can store it on a disc

and reuse it. Not only that, but I can alter it slightly on each occasion if I want. A skeleton confirmation note, for example, can be saved as a TEMPLATE.STD on the boot disc with spaces into which I can insert the booker's name and address, venue and so on. Using Find, I can jump from space to space inserting all the details. I usually store expressions that I use often (like 'the above address') as phrases. Then I generally print out two copies. I send one to the client and keep the other in a binder which has now become a sort of working diary. And because I use drive M:, all the newly created letters disappear as soon as I switch off the machine. My PCW saves me so much time.

For someone who does over 400 shows a year, this is a boon. In the old days, I used to get a standard form printed. Each batch used to set me back about £50 to £100. In three years, my machine has saved its own outlay, on this one job alone, regardless of all the other uses, to which it is put.

One of those is running off an advice sheet. Let me explain a little. Some time ago, I began to notice that the organisation of parties was getting worse by the week. I would turn up to find the floor knee-deep in food, kids armed with squeakers, ladies distributing ice cream during the performance not to mention all the toddlers, dogs and cats on the rampage at the same time.

One day, in sheer frustration, I sat down and composed a load of hints and tips on setting up the most desirable conditions in which a magician can perform. This regularly gets sent out to people who have made bookings along with the confirmation. It's yielded significant results as well. To have such a document printed would cost roughly £100. I run them off, as and when needed, for the price of the paper.

The shows go on and on

My next task was to find a database on which to record all the shows. This, after all, had been the main reason for buying my PCW in the first place. I eventually opted for Caxton's Cardbox, now no longer marketed. Now I wonder how I ever managed without it.

It works very much like a traditional card index but has one major refinement; the ability to look up records by an assortment of criteria. It can search through hundreds and pull out any that fulfill a given set of conditions. So if I'm searching for a birthday show that I did outdoors in Romford and the child was six, all bookings fitting that particular bill will be displayed in moments.

Often when I get an enquiry, the prospective client will say something like 'You performed for a boy called Michael – or perhaps it was Mark – in Dagenham somewhere. It was last year or maybe the year before – I can't really remember, but he's in the same class at school. Oh yes! You had a talking rabbit with you that day ...'. In the old days, I would have had to plough my way through 600 or so parties to see if I could trace it. Now the computer instantly finds all the Michaels and Marks in that area of a similar age who have undergone the dreaded talking rabbit treatment.

Sooner or later?

Once the field has been narrowed down, I am able to run up details of any connected shows or ones that have taken place in the same locality. Consequently, when Punch says 'Hello, girls and boys' he has a pretty shrewd idea of when he last met them.

Cardbox took a lot of stick in the computer press for not being able to sort alphabetically or do calculations. To me, however, it's the perfect system. Records are stored in chronological sequence (as they're entered), so that I can go back through them in the same order in which I did the shows in the first place.

Inevitably the documentation didn't really come upto scratch. Just finding the instructions on how to merge two existing datafiles into one proved incredibly complicated. This became necessary when I fitted a double density B drive to the machine. The secret (when it was finally revealed to me) seemed to lie in outputting all the data from the first disc to a new file which is subsequently read into the file on the second disc. The whole process took several hours.

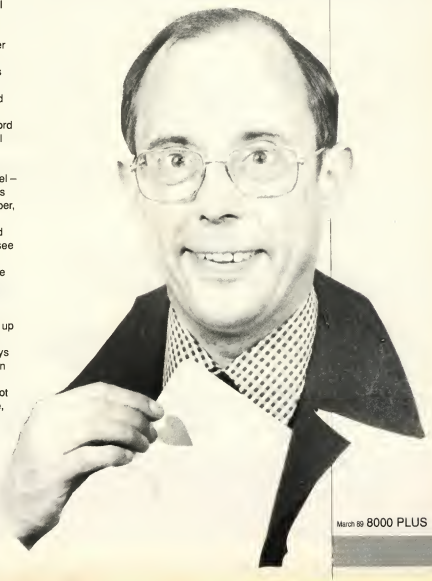
To sum up

I introduced SuperCalc 2 last of all. Its original purpose was to keep a daily log of income and expenditure, producing a monthly balance sheet. I was determined not to spend any more wasted hours forcing the books to cross check.

I also discovered that it can lay out invoices very professionally. This is a godsend when doing work for local authorities and agents who don't settle up with me on the actual day of the show.

Annual statistical analysis reports can be compiled too. I keep such a sheet and update it every month, extracting the relevant information from my database. In this way, I can study trends and adapt accordingly. Are audiences getting younger or older? Are more shows in halls or schools? What is the ratio of birthday parties to playgroups?

The time must soon come when a computer is considered as essential to a professional magician as a telephone answering machine and car. At one time, wizards travelled everywhere by public transport and arranged their bookings through the post. Some still do, of course, though their modernised rivals naturally have the edge on the competition. So it will be with the PCW; using one enables me to give a far superior service to my clients. It's taken over many soul-destroying chores and frees me to pursue the side of entertaining that really matters. ■



Company Of Wizards

The Magic Circle is an unofficially constituted society for magicians first set up in this country over a hundred years ago. The body meets every week at a fixed address in London; their purpose is to provide a club where all member magicians can exchange secrets and work to uphold professional standards. The circle also publishes a magazine for worldwide readership. If you're interested in joining, or simply want to know more contact Christopher Pratt, 13 Calder Avenue, Bookman's Park, Hertford AL9 7AH on 070754971.
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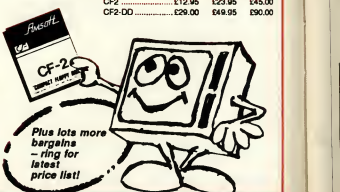

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DECISION TIME

Learning to make decisions and control loops answers most programming problems; in Assembler it's the same

Making decisions is hard enough in real life; going round and round thinking shall I take up hang-gliding or found The Order of St Alphonse the Abysmal?

But being able to make decisions in a program is fundamental to its successful operation. Most programs are designed to do something until some condition is met and then either stop or do something else: they loop around and check each time to find whether or not they should do it again. This month we consider the different ways of controlling the operation of loops and making decisions

Once you've set up the environment a program needs to do its job – initialised it in programmer speak – its time to write the actual code. There is no best way of writing a piece of code; there might be a fastest method or one that uses the least space but these are rarely important since machine code is so fast and compact anyway. As long as it works that's good enough; of course it helps if you understand why it works. With the tests that control loops and decisions, understanding is more important than usual as a poorly thought out test can have strange and unpredictable results.

Many loops, perhaps most in a well designed program, will be subroutines. There will be routines to convert the value of a byte to a decimal screen representation and print it for example, and one to collect key presses. There will certainly be loops that read and write files from disc. All of these loops have to know when they've finished.

So how do you actually test for anything in Assembler? Fortunately it's very easy, there is a special register called the flag register in which the individual bits are set by the Z80 depending on the actions it has just carried out. While not every action sets one of these bits, everything you need to know to make decisions in your programs does, and it's the flags you test.

The actions that set these flag bits are those performed on the Accumulator (reg A). For example a compare instruction will set the zero flag if the byte in the accumulator is the same as the one being compared; this is probably the most common test performed in Assembler and with a bit of thought almost any required condition can be tested for using the zero flag.

```
COUNT:    MVI    A,255
LOOP:     DCR    A
          CPI    65
          RZ
          JMP    LOOP
```

The little subroutine above does nothing useful, merely loads 255 into reg A, decrements it and checks to see if it has reached 65 yet. When it does the instruction RZ causes the loop to be exited. It helps to know exactly what is happening so we'll go through it step by step.

Single stepping

The actual loop is the section that starts with the label LOOP and finishes with the JMP LOOP. The subroutine would be used by CALL COUNT from somewhere else in the program. The first thing that happens is that the value held in reg A is decremented, next it is compared with 65 using the compare immediate instruction CPI. This instruction actually performs a subtraction from the value in A but instead of putting the result in A it only uses the result to set flags and then throws it away leaving A unchanged.

Flags are set every time this comparison is done and we could test for any of them. While the number in A is larger than 65 the comparison will set the sign flag to 0, the carry flag to 0, the parity flag to 0, and the zero flag to 0.

```
COUNT:    MVI    A,65
LOOP:     DCR    A
          CPI    200
          RZ
          JMP    LOOP
```

This loop will have quite a different effect on flags although superficially it looks the same and returns when the same condition is met. But now, as the value of A is between 65 and 0 the sign flag will be set since the result is negative and the carry bit will be set since a borrow was required to do the sum.

Zero, ergo sum

Once the value in A reaches 0 a further decrement will make it 255 (both increment and decrement instructions cause the value in reg A to wrap around, so incrementing 0 produces

Get set, go

When a bit is set it becomes a 1, when unset it becomes a 0. This may confuse programmers unfamiliar with the process especially when testing for zero. If the zero flag is set then it is a 1 and the result of the operation is zero, if it isn't set then it is a 0 and the result of the operation isn't zero.

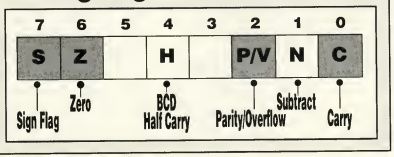
Is it or isn't it?

What is the difference between Assembler and machine code? Well Assembler is the program written using mnemonics like CPI or MOV while machine code is the bytes in memory that the Z80 understands. An instruction like LHLD 0CFFFH is just text and means nothing to the Z80. Machine code is produced only when these mnemonics are translated using something like MAC and HEXCOM.

The flag register

Although there are eight bits in the carry flag only six of them are used. Of these six you can test four, the others are used by the Z80 for its own purposes.

These four are the Zero flag, the Carry flag, the Parity flag (sometimes called the Overflow flag), and the Sign flag. Generally the Zero flag will be the most heavily used – luckily they don't wear out.



```
         ORG    100H
         JMP    START
ENDNUM:  DB     20H,00,00,00,0AH,0DH,'$'
COUNT:   DB     0
;
START:   MVI    C,1          ;GET A CHARACTER
         CALL   005          ;USING BDOS 1
         CPI    3            ;..IS IT ALT C?
         RZ                  ;GO HOME IF ALT C
         LXI    D,ENDNUM     ;ADDRESS OF STRING
         INX    D            ;1 PAST LEADING SPACE
         LXI    H,COUNT      ;COUNT ON CURRENT LOOP
         MVI    C,100        ;INITIAL VALUE FOR 100S
LOOP1:   CMP    C            ;..IS VALUE > 100?
         JC     FIN1         ;IF TAKING C LEAVES A..
         SUB    C            ;..NEGATIVE THEN END LOOP
         INR    M            ;INCREMENT VALUE OF COUNT
         JMP    LOOP1        ;GO AROUND AGAIN
;
FIN1:    PUSH   PSW          ;THIS HAPPENS AFTER LOOP
         LDA    COUNT        ;VALUE OF COUNT IN A
         ADI    48           ;ADD VALUE OF ZERO
         STAX   D            ;HOW MANY HUNDREDS/TENS?
         INX    D            ;POINT TO NEXT BYTE OF ENDNUM
         ANI    0            ;ZERO REG A
         STA    COUNT        ;RE-INTITIALISE COUNT
         MOV    A,C          ;LOOK AT VALUE OF C
         JZ     UNITS        ;IF SO GO TO UNITS
         MVI    C,10         ;SET C FOR 10S IF NOT
         POP    A            ;GET NUMBER IN A BACK
         JMP    LOOP1        ;GO AROUND AGAIN
;
UNITS:   POP    PSW          ;RETRIEVE A FOR UNITS
         ADI    48           ;ADD VALUE OF ZERO
         STAX   D            ;SAVE VALUE IN A TO ENDNUM
;
PRINT:   MVI    C,9          ;MAKE A CALL TO PRINT STRING
         LXI    D,ENDNUM     ;ADDRESS OF STRING
         CALL   0005         ;CALL BDOS
         JMP    START        ;ROUND AGAIN
         END
```

This listing will wait for you to press a key and then display the number which represents it inside the machine. The process repeats until you press [ALT]c which has a value of 3. It can easily be adapted as a subroutine for use in your own programs.

255) and now the comparison sets the sign bit to 0 and the carry bit likewise. This continues until the value in reg A reaches 200 and the subroutine exits.

The instruction RZ does the actual flag test; it stands for return on zero, but we could return on some other flag test.

```
COUNT:   MVI    A,65
LOOP:    DCR    A
         CPI    200
         RP
         JMP    LOOP
```

If the routine were changed to make the test the clearing of the sign bit then we could test for a positive value in reg A. The subroutine will now loop around until the value in reg A is decremented right past zero to 255, then the return on positive test will find the sign flag set to 0 and exit the loop.

One important use for these various tests is in multi choice situations. If you wanted to choose a course of action if a value were less than 128, another if it is exactly 128 and a third if it is greater than 128 then something like this could be used:

```
TEST1:   LDA    VALUE
         CPI    128
         CZ     ACTION1
         CM     ACTION2
         CALL   ACTION3
         RET
```

This routine gets the byte to be tested from the location defined by VALUE (which would have been set up during the initialising phase), loads it into reg A and compares it with 128. If the byte is 128 then the routine calls ACTION1 (which is the name of another subroutine), if it is less than 128 then the sign flag will be set and the routine calls ACTION2, otherwise the value is greater than 128 and the default comes into operation causing an unconditional call to ACTION3.

Something to watch for is that the sign flag is set according to the value of bit 7 in A, so if a compare operation leaves a value in A greater than 128 then it will be regarded as a minus number in line with the usual treatment of signed integers (up to 127 is positive while 128 to 255 is negative). In these situations use the carry flag instead. This is set if the compare requires a borrow to be done, something which only happens if the number in reg A is smaller than the number being taken from it. This has been done in the listing below otherwise characters with values greater than 227 couldn't be displayed. ■

The last bug

It can be useful to know what the error messages mean when using the MAC assembler. These are the letters that appear in front of rejected lines thrown up by MAC during an assembly. The Amstrad manual doesn't help much; so here they are with what they mean.

B Balance error: this usually means that a macro didn't have an ENDM statement after it but can mean a bad conditional assembly sequence.

C Comma error:a macro error meaning that you've lost a comma delimiter somewhere thus making the parameters nonsense.

D Data error: an RMAC error this one. RMAC can't put the data in the specified data area.

E Expression error: your expression is ridiculous and MAC doesn't want to know about it.

I Invalid character: a control character other than carriage return, line feed, tab or end of file has been found. Are you using a Locoscript file perhaps?

L Label error: usually means you've used the same label twice. This one is very common since there are only so many meaningful six letter words.

M Macro overflow: too many nested macros or infinite recursion. Macros can nest to any depth (until the macro table is full).

N Not implemented: means you've tried to use a feature found in RMAC but are actually using MAC; that was silly.

O Overflow: the expression is too complex for MAC to unravel, simplify it. Also occurs if there are more than 9999 LOCAL labels!

P Phase error: a bit subtle this one (means we don't really unserstand it) but moving any LIB files to the beginning of the listing should cure it.

R Register error: the register in your listing isn't a register one really.

S Syntax error: you've written it wrong.

U Undefined symbol: MAC has found a label where no label should be. You've used one without defining it anywhere (a jump to a non-existent subroutine or loading a register pair with a location you've forgotten to define anywhere).

V Value error: this is a bad operand, or perhaps just misguided. Have you missed out a comma?

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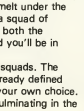

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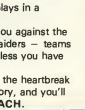

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THE HARD BIT

What comms between you and your phone lines? A modem is the answer. We consider the hardware you need to get online.

There are two parts to any communications setup on the PCW. You need hardware and software. Considering how small most modems are there seem to be an awful lot of features associated with them. This month we consider just what those features are and which of them you need.

If you've ever had the opportunity of using a friend's comms, you were probably surprised by how easy it all appeared. So why is there this mystique of complexity and confusion associated with modems? Like many things it has its origins in history.

The main requirement in comms (after getting it to work at all) is speed, since the speed of data transmission is the factor limiting the system's usefulness; you wouldn't use it if only one word came through every five minutes.

One of the first services made available to the public was Prestel, which came on line at a time when modems were very expensive. To make the system work fast enough to be attractive they needed to send data at 1200 baud, which for practical purposes means at 1200 bits per second. Making a modem to recieve at this speed didn't cost too much, but the hardware needed to send the data was expensive.

In typical British fashion they decided on a compromise and a modem that could receive at 1200 baud but send at only 75 baud was adopted. Since Prestel didn't need much more than the occasional number from its customers the slow send rate wasn't important; costs were kept down and the system worked. Of course no one else in the world uses it – c'est la vie.

The minimum requirement for a real two sided computer conversation is a 300/300 baud rate. This works out to be 30 characters per second which is about three times as fast as a good typist. Sending a 5k file would take about six minutes which would compare reasonably with the Royal Snail for cost (and beat them hollow for speed).

A duplex rapprochement

The baud rate a modem can boast is only half the story. When you talk to someone on the phone lines it's quite easy to speak at the same time as the person on the other end of the line; you can interrupt them if they're talking rubbish or simply because you have something more urgent to say.

Being able to talk both ways down a line is called full duplex communication and simply means information can go both ways at the same time. Cheaper modems sometimes offer half-duplex, which means that while the computer you're talking to has the line you can't interrupt. This means that you can be sent kilobytes of garbage (or be getting nothing at all) and not be able to tell the sender so until you're asked: very irritating.

Half duplex modems are not very useful for the hobbyist so even if the price looks attractive leave them alone. A similar problem can occur with originate only modems, which used to be popular for calling into commercial systems, they aren't really much use for general comms. This brings the minimum requirement for practical comms up to a 300/300 full duplex originate/answer modem; but you need only worry about the last bit if buying surplus or ex-commercial modems since these are sometimes answer only devices.

The next thing to consider, especially if you're buying older modems second hand, is whether you need a manual or auto-dial modem. A manual modem isn't one that has a handle you have to keep turning, it simply means that the modem itself cannot dial a number. With one of these you will need a telephone as well. The phone plugs into the back

The going rate

For no very good reason the various speeds of data transmission have V numbers. The common ones are in the list below with the slash separating the transmit and receive speed.

V21	1200/75
V23	300/300
V22	1200/1200
V22bis	2400/2400

Only a year ago modems with auto dial operating at 1200/1200 were close on £1000. The WS 3000 is an example of the new breed of high performance modems available for less than £300. Even the 2400/2400 band version is only just over £400. Communication at a price that makes it more and more tempting

Talking to yourself

If you do get a half duplex modem (because it's cheap) you may find there isn't anything to see when you type in messages; this is because the software sends your letters to the modem not the screen. Normally the computer you're sending to uses the two way nature of the link to repeat everything back down the line and this is what you see on the screen.

Letters typed in on a keyboard in sleepy Borchester go all the way to a friend at Emmerdale Farm where the computer picks them up and echoes them back to the sender. Your software picks up the letters coming in and puts them out to your screen. From keyboard to screen – a round trip of one hundred and sixty eight miles.

and is used to actually dial the number. Only when you have a connection (you can tell by the whistling tone from the modem at the other end) do you let your modem take over. This is usually done by pressing a button on the front marked Modem connect or something similar.

Pulses are good for you

Manual modems are easy enough to operate but it can be tedious constantly redialling a busy number; on the other hand a lot of auto-dial modems have their own special ways of working, some of which aren't supported by all software. Generally speaking an auto dial modem that is advertised as Hayes compatible can be made to work with most software. Auto-dial is more expensive but much more fun so get it if you can.

Some impressive sounding modems are very cheap, watch out for auto-dial modems that use the American system of multi frequency dialling (tone dialling). These can't be used with the UK system of pulse dialling (that's why they're cheap). This is beginning to change with the introduction of system X exchanges; if you have one of these at the other end of your telephone line you may be able to use a tone dialling modem. It's worth ringing Telecom and finding out.

Some modems have little lights on the front and some don't. The ones that do have various cryptic letters beneath them; usually the only one that will mean anything to you is the one saying ON. If you can get a modem with lights then do so since they can supply a lot of information concerning exactly what is happening. In fact you can sometimes solve a problem instantly just by noting what is happening with the lights.

The most useful light is the one which reveals whether or not you have a carrier tone, usually called Data Carrier Detect. If this one glows then the modem has managed to make a connection. The other really useful light is On Line, showing you are actually using the telephone line. On reflection all the lights are useful.

The other important requirement in even a basic modem is an internal speaker. Being able to listen to the state of a call can tell you an awful lot about why something isn't working as well as it should.

For instance, if you've been dialling a number you think is a Bulletin Board, getting a connection and then inexplicably losing it again after a few seconds it can prove illuminating to hear not the expected odd high pitched squeal but a puzzled gentleman in Scotland saying 'If you don't identify yourself immediately I'm going to the police'.

Modem times

If money is no object then you can simply buy the modem of your choice from a reputable dealer and have the dealer sort out the cable for you. This is the easiest option. In practice most modern modems can be bought with a suitable cable simply because the PCW is such a popular and well known machine. Problems can begin to creep in though when buying secondhand, often the first choice for beginners interested in comms.

If you do buy a secondhand modem, especially one no longer supported and lacking documentation, then providing a cable for it can be the most difficult part of getting on line.

Assuming you have an RS232 connection available (via the CPS8256 or a third party equivalent) then the minimum number of connections you need is three and the maximum needed is seven; most of the twenty five pins are ignored.

You must have pin 7, which is called Ground; the others are pin 2 transmitted data and pin 3 Received data. On the PCW the number and names of the others that may be required are: pin 4, Request to send, pin 5, Clear to send, pin 6, Data set ready, pin 8 Data carrier detect, and pin 20 Data terminal ready. In an ideal world these would match the pins on any modem you might buy with an RS232 connection; unfortunately this isn't always so. Not all RS232s are implemented with a 25 pin D connector and even when they are, manufacturers use whichever pins take their fancy. Pins 7, 3 and 2 are often right but the others could be anywhere.

If you really can't find out how to wire up a cable for a secondhand modem then a dealer should be able to figure out the answer using a special device called a break-out box, a cable with switches allowing the various lines to be connected in different ways.

The hardware side of comms can be difficult to sort out so unless you are the sort who likes solving puzzles it might be a good idea to avoid any modem you aren't certain of being able to simply plug in and have work.

So where would you look for a cheap reliable source of secondhand modems? The best place is the secondhand pages of computer magazines or the specialist publication Micro Mart. There is a constant supply of 300/300 baud modems coming onto the market as first time users upgrade to faster and better featured equipment.

Occasionally, when buying from an enthusiast, you can get not only his old modem but access to a considerable body of knowledge as well, and after all, if he didn't want to talk then he wouldn't be in comms in the first place. ■

Hayes there

Being one of the first manufacturers of a popular modem the American Hayes corporation set a standard for modems operation in much the same way as Epson did for dot matrix printers. The Hayes AT commands have become a de facto standard around the world.

Who's there?

Auto answer is one of those things that sounds very impressive, and it is. If you have access to two modems and one of them is auto answer then you can communicate with yourself, as the Californians would say. Whether you have anything to say that you want to hear is another matter.

Now showing

ON Power On. Shows the modem is getting power.

TXD Transmitting Data. Flashes with each character sent.

RXD Receiving Data. Flashes in time with incoming characters

DCD Data Character Detect. Stays on when the connection is made

RTS Request To Send. Lights up when the computer is ready for another character.

CTS Clear To Send. Lights when the modem is ready to accept a character from the computer.

DTR Data Terminal Ready

OL On Line. Lights when the modem is using the telephone line.

AA Auto Answer. An unusual one this. If you've got it then it lights to show that the modem is auto answer mode.

These are most of the signals likely to be shown on the front panel of a modem though rarely will you get them all. Occasionally more than one signal will be indicated by one light

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FLIPPER could do some pretty surprising things. It could split your PCW in two, letting you run LocoScript 2 in one half and a CP/M program in the other. Or it could let you load two CP/M programs at once if you preferred, one in each half. It could FLIP you from one half to the other in under 3 seconds, any time you wanted. And it wouldn't lose your place.

Unfortunately, there were a few things it couldn't do. In particular, it couldn't load either *Mini Office Professional* or *LocoFile*. Serious shortcomings indeed.

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SPEAKING OUT

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All PCWs

One of the things which can make a computer seem a lot more human, and a great deal friendlier, is its ability to speak. Until now the PCW has been restricted to a somewhat peremptory bleep but all that is about to change.

The speech module is designed to work in conjunction with the parallel I/O module which SM Engineering have been selling for some time. Originally the speech module was designed purely for in house use as a programming teaching aid - slightly more interesting than the usual fare of relays clicking on and off - but the speaking board generated so much interest that it is now being marketed directly.

The actual sounds are generated by a single chip, the SPO256-AL2 , made by General Instruments and one of several speech chips on sale. This has been complemented with an audio amplifier capable of delivering eight watts of power, so this board can really shout at you.

What makes this speech chip different from the usual kind of sound chip found in computers like the CPC6128 is its ability to generate the different parts of speech directly. Ordinary sound chips can only be told to generate a specific tone at a certain volume although often there is enough control over the way the sound is generated to simulate speech however, if you have ever tried to get a sound chip to so much as say 'Hello' you will appreciate just how much programming is required. A chip generating allophones takes all the hassle out of programming a computer to speak.

Did you really mean that?

Programming the speech module via DATA statements is extremely easy but for something a bit more challenging a program to read text and output the correct allophone codes to produce speech has to be the next project.

For good old fashioned English words like 'pig' and 'mangelwurzel' that are spelt the way they sound this is relatively straightforward but you'll struggle with imported words like the French 'mangetout'.

Allo allo allophone

Parts of speech in this context aren't those familiar verbs and adjectives of fond schoolboy remembrance, rather they are the basic building blocks of language; the actual sounds that go to make the words used in English.

All words are built from phonemes, of which there are some thirty or so basic kinds, but they can be sounded in slightly different ways depending on where they come in a word. These different versions of phonemes are referred to as allophones, and the sound chip used by SM Engineering can produce 64 different ones.

The documentation that comes with the board includes a complete list of the allophones, the number the chip needs to generate it, the symbol for it, the length of time it takes to sound in milliseconds and an illustration of the sound itself in a common word. Just reading the list is an education; did you know that the CH sound is called an Affricative or that TH is a Voiceless Fricative? Somewhat easier to guess is that the NG sound in aNGer is Nasal.

So how do you actually go about producing speech? Well first of all you have to have one of SM Engineering's parallel I/O interfaces into which the speech board is designed to connect (along with all their other products). In fact the board is designed to recognise signals from the I/O interface so it would be difficult to use it in any other way.

The only other requirement is a 12v DC power source (which is not available from the edge connector on the PCW). One of those heavy plugs often supplied with portable computers, battery rechargers and electric keyboards is suitable. The whole thing is built into a slightly larger than average plug that goes straight into the wall. Tandy sell them to produce a range of voltages from £11.

To actually get sounds out you have to put numbers in. This can be done easily with a Basic program and with very little difficulty using assembly language. Examples of programs in both forms are on the disc that comes with the Parallel I/O module. In fact SM Engineering include programs to drive all of their hardware peripherals with the Parallel I/O module. In the box is an adaptation of their Basic listing to show just how straightforward programming the speech module can be.

Saying it like it is

Some experimentation is necessary to get the speech as clear as possible. This can involve changing the choice of allophone to suit the actual words used as well as adjusting the pauses between words. Occasionally you will need to put pauses between the allophones to get the corect intonation.

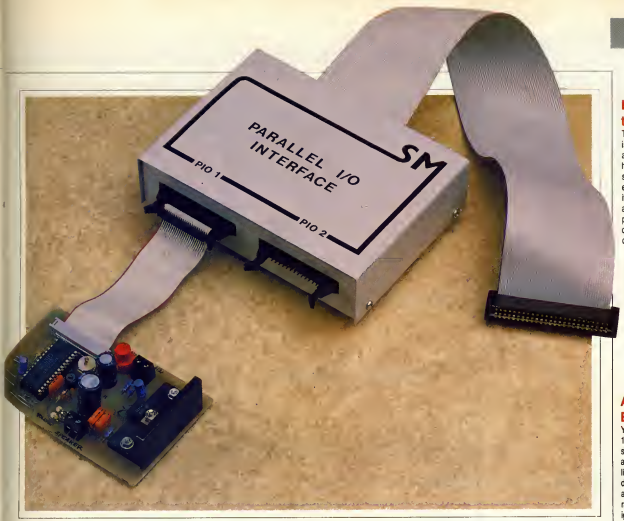
Lines of communication

The SM Engineering I/O module supports two physical PIO ports (Peripheral Input Output) which are naturally enough represented by two PIO chips inside the box. Each of these PIOs can be made to give two different output channels (called ports). PIO 1 supports 1A and 1B while PIO 2 supports 2A and 2B. These ports are not the same as the ports you call with the OUT command from Basic or machine code and relate only to the PIO's in the Parallel I/O module.

To make this even more fun the PIO's are capable of operating in four different modes. The eight lines available (which the knowledgeable among you will already have spotted is enough to output one byte at a time) can be set to Mode 0, 1, 2 or 3. Mode 0 is all lines set to out; mode 1 is all lines set to in; mode 2 is all lines bidirectional and mode 3, which is called control mode, in which some lines go one way and the rest the other way.

The Speech module is set up with PIO 1 using port A and the port bidirectional. This is done by sending the number 207 (Hex CF) to port 170 (Hex AA) which puts the PIO into a receptive state; it will now sit and wait to be told which lines are input and which are output.

If you think of the lines as being numbered 0 to 7 like the bits in a byte then any of the lines can be set to OUTPUT by putting a 0 in the corresponding bit and to INPUT by putting a 1 there. The port number remains the same and the new byte is now sent. For the speech module this is 10000000 binary, which is 128 decimal (80 Hex). This sets all the lines to OUTPUT except line 7 which the speech module will use to signal back to the I/O module. It has to tell the program to wait while the last allophone is being output so sends a busy signal until it's finished. In fact the printer does the same thing while it's printing a character.



Expert testimony

The exact number of phonemes is a subject of contention among phoneticists, and always has been. Whether a particular sound is a variation on an existing form or a new form in its own right is one of those arguements that can embitter people for life, like the number of angels that will fit on the head of a pin.

Attention to Basic detail

You may be confused by lines 170,180,190. The strobe on line six is set high then low then high again to confirm that the data on lines 0 to 5 is correct. If this isn't done then the speech module assumes the numbers are just random signals on the lines and ignores them.

Quite a lot of advice is included on which forms of similar sounding allophones go best at the beginning or the end of words as well as how to improve the quality of speech by repeating some of them, for instance an 's' in the middle of a word often sounds better repeated. In the word 'socks' both of the s sounds needed doubling to make the word intelligible. In fact after a little practice you will begin to get close to the results you want first time.

Fine tuning the data statements to get the best possible effects is definitely the most amusing aspect of the speech module. Early attempts to persuade it to say 'David, change your socks' resulted in some weird and wonderful sounds. A selected panel of experts were invited to listen to the results and guess what was being said but this resulted in so much hilarity that it had to stop.

As a hardware peripheral the speech module beats anything else in the price range for entertainment value. As an aid to encouraging the aquisition of programming skills in the young (and not so young) it can be surpassed only by instant colour graphics which no amount of money can buy for the PCW anyway.

So who would buy the speech module? Well, if you are the sort of person who buys software for fun then buy this instead next time. It won't cost any more than a good piece of software and you really can use it to break the ice at parties.

SPEECH SYNTHESISER

PLUSES

- ▲Good documentation
- ▲Simple to use
- ▲Great fun
- ▲Extends capabilities of the PCW
- ▲Sample programs are supplied

MINUSES

- ▼Comes as a naked board
- ▼You can't use it without the Parallel I/O module
- ▼You need to feel confident about connecting things up

RANGE OF FEATURES	**5/5**	**EASE OF USE**	**4/5**
PERFORMANCE	**4/5**	**DOCUMENTATION**	**3/5**

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Speaking in Tones

```
10 REM Speech Program - adapted from S.Marks
20 adata=168: acon=170: mode2=207: config=128
30 strobe=64
40 OUT acon,mode2
50 OUT acon,config
60 REM
70 DATA 33,20,35,12,21,4:REM                David
80 DATA 50,20,11,10,3:REM                   change
90 DATA 25,58,3:REM                         your
100 DATA 55,55,24,24,2,41,55,55:REM         socks
110 DATA 4,4,4,4,4,4:REM delay
120 REM
130 totalcodes=28
140 RESTORE
150 FOR allophone = 1 TO totalcodes
160 READ code
170 OUT adata,code+strobe
180 OUT adata,code
190 OUT adata,code+strobe
200 busy=INP(adata)
210 IF busy-127>0 THEN 200
220 NEXT allophone
230 FOR x=1 TO 1000 :NEXT
240 GOTO 140
```

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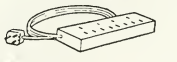

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A Matter of Course

PCW training update; Sharon Bradley flexes her muscles and hits the trail.

You've done it at last; you've gone out and bought yourself the PCW you've been hankering after for so long. It's guaranteed to take the toil and drudgery out of producing your latest manuscript (you've been told); it's sure to zero in with sharp efficiency and impose order on the accounts which you've been stashing away in a shoebox for the last six months (you read somewhere). Now it's sitting on your desk in all its resplendent glory with a faintly expectant air about it. Suddenly, the question that you've been repeatedly pushing to the back of your mind looms large in all its horrible intensity: how are you going to make this machine do what you bought it for?

It's easy to fall for the idea of having a computer permanently available at your fingertips; but somewhere in the headlong rush to realize your dream, you can forget that a lot of work needs to be fed into it before it will start to yield anything like the dividends you expect. As we've all discovered at some stage or another, a computer is only ever as good as the person using it. If you can't make it do what you want, it's easy to become downhearted, put it back in its box and leave what can amount to five hundred quids-worth of machine vegetating in the corner.

The answer can lie in training. And it's not just the inexperienced individual who can benefit from it. The small firm, who can't afford to have umpteen of its employees wasting time flicking through manuals day in day out, might well prefer to pay someone to come and deliver all the know-how they're ever likely to need in the course of one day. There are also training companies who will willingly tailor the training they deliver, whether in–house or on–site, to suit the requirements of the company (or individual) who is paying for their services.

All Shapes and Sizes

Of course training packages come in all shapes and sizes. It can be done 'in-house' which means the individual or group undergoing training travels to the premises of the training company for the duration of the instruction, or it can be done 'on-site'. This means that the training company comes to you, either at work or at home. Not surprisingly, this tends to be that little bit more expensive. If one day's in-house training costs £125.00, you can expect to pay something like £150.00 for a day's on-site training plus travelling expenses if the company has to travel beyond a certain distance.

If you're running a business you also have to weigh up whether it's going to be all that beneficial to train in your own premises. By the time you've been interrupted by phone-calls, visitors, stray business and so on, you can have lost a great deal of what you've been paying for, an expert's time. That's why many companies prefer to deliver the training on their own premises.

Training companies are also, as a rule, happy to provide one-to-one tuition – sometimes it's all they will offer; failing that, groups rarely, if ever, exceed, two to three trainees.

The length of training varies enormously and can be anything from one day to two or three. Some companies are also fairly flexible about how you use those hours. You can do it all in one fell swoop, or you can divide it up to suit you.

The most common courses are in word processing. And, as LocoScript was written specifically for the PCW machine

(Amstrad commissioned Locomotive to write it while the PCW was still at the design stage) it's therefore not too surprising to learn that ninety per cent of the word processing courses on offer for the PCW are in LocoScript (1 and 2). They're then divided into basic and advanced tuition. Having said that, there are good courses available in Tasword, WordStar and in the word processing module of Mini Office Professional.

Full steam ahead

Not all training courses are for the dedicated wordsmith. There are courses in using spreadsheets, databases, DTP and graphics, accounting packages and even some which cover general introductory information like keyboard skills and operating systems. However, one company providing solid training in all of these areas is not going to be all that easy to come by.

It's popularly believed that computer training is an expensive business. And yet, if you put it into perspective, you probably don't end up paying any more for it than you do for driving lessons. It just feels like more because you're cramming everything into one day.

If that doesn't convince you, then think about the money you're saving as a result of increased speed and efficiency. How much is it costing you because you don't know how to get something done; how much does it cost in finding out by trial and error?

Prices of training can vary enormously from company to company; one company may only charge £45.00 for one day's training, another may charge as much as £125.00 – so have a good look around before you commit yourself to a particular course.

Some companies offer a kind of personal consultancy role as well providing standard training. Gary Hall, based near Edinburgh in Scotland, arranges specific tuition courses on the Amstrad PCW. He will also advise a prospective computer purchaser as to the most appropriate type and size of computer required and the best package for the application in hand. He then supervises the purchase and installation of both the hardware and software, and undertakes any training that's required. This work is not solely restricted to Amstrad PCW machines. He charges £5.00 an hour for the preliminary research and advice, and £10.00 an hour for any follow-up training. He is also willing to consider a fixed fee for any package deal.

'Calling all writers ... '

Charles Mansfield of Icon Communications in Nottingham has developed a comprehensive training package around the PCW 8256. The kind of user most likely to benefit from The Communications Course is either currently involved in – or indeed thinking of getting into – a career in writing (either technical or creative), information technology (ways of handling and processing information), or PR.

The training consists of a number of modules each of which is based on one of the most popular packages to be used on the PCW: thorough training in LocoScript 2 prepares you to sit (and what's more, pass) the Royal Society of Arts exam in wordprocessing. SuperCalc 2 provides the spreadsheet learning required to get to grips with the financial communications module, while a study of BASIC (Jetsam) supplies the complete novice with an introduction to programming. The final module of the training package explores newsletter production using DTP and takes Database Software's The Desktop Publisher as its model program.

Each module costs £100.00 plus VAT. But where The Communications Course differs from more orthodox methods of training is in its open learning approach. That means you complete the training at your own pace in the privacy of your own home. This is backed up by regular

Charles Mansfield of Icon Communications who have developed the open learning Communications Course for the PCW

workshops during which you can put any questions or difficulties you might have to Charles and the other people behind The Communications Course.

In addition to all that, if you can't get your hands on a PCW, Icon can provide ex-demo PCW 8256 machines for sale at £250.00 plus VAT.

When Icon first put together their Communications Course a couple of years ago, they were mainly concerned with offering training to the unemployed jobseeker and the small firm wanting to computerise. But since October '88 when the government launched the restructuring of their training grant system, courses like this have been hard hit.

Suck it and see

Wetherby Training Services have been involved with computer training for the last eleven years and have got over 120 franchised learning centres throughout the UK. We went along to Wetherby Price Training in Salisbury – just one of the centres under franchise – to eavesdrop on a spot of tuition.

Pam Price, the woman behind Wetherby Price Training, is a maths teacher by profession, but has been directing training in secretarial skills and computing for quite some time. During her time as a word processing teacher she saw every kind of mistake that it's possible to make, and says that the Wetherby Price courses have been designed with all the usual pitfalls in mind.

"All the training courses that we operate here are carried out on a one-to-one basis with the help of manuals, audio cassettes and, of course, PCWs", explains Pam. "If any of

In with the New

Last October the government did away with the Local Training Grant scheme which had been designed to help small firms finance training for their employees. They have recently introduced, however, the BGTT (or Business Growth through Training) scheme – specifically for computer training - to replace it. At the time of going to press, further information was pending

Bigger isn't always better

PCW training courses are being increasingly supplanted by PC equivalents – but, curiously enough, it seems to be happening at a much more noticeable rate in the south than in the north. Of course, the reason for this is almost certainly an economic one: the south generally has more office business, and the north is not quite as affluent. But it's a phenomenon which, not unnaturally, leads people to question whether PCW training courses will shortly be a thing of the past.

The good news is, that PCWs will always be considerably cheaper than their bigger, more powerful rivals. There are some tasks that just cannot be performed any more effectively on a larger machine; if you originally bought your PCW to help you write your latest bestseller (and most PCW owners bought theirs for that very reason – well, alright, if it's not for the latest, then it's at least for the first) then there isn't a machine that will do it any more efficaciously than the PCW.

PCW daisy-wheel output looks polished and professional – easily comparable to the quality of a PC printout. Yet at the risk of exaggerating slightly, you can very nearly buy your PCW (don't forget that the printer and keyboard are included in that price) and the appropriate word processing software for the price of one PC word processor package!

Sends you reeling

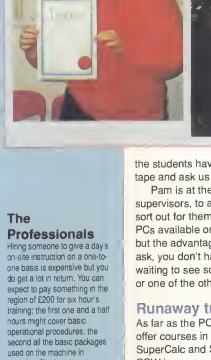
If, despite all encouragement to the contrary, you have neither the time nor the inclination to undertake in-house training, then a company called Head-Line Communications may well be able to provide you with an answer.

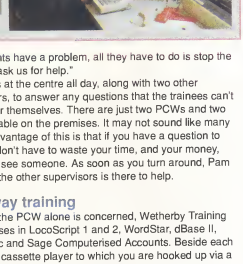
They have developed a self study training pack which consists of two audio cassettes, an interactive 3" disc to insert into your machine and an 'electric book'. All you have to do is set aside the time – at home – when you can work without too many distractions and get cracking.

The disc contains exercises and tutorials to help you check your progress, and to hammer home the points made during the audio tuition on cassette. The electric book is the disc-bound revision manual. All three elements interact to provide you with training that you can complete in a number of subjects at your own pace in the privacy of your own home (or car for that matter).

Inside every pack is a 'freebie' which you should be able to find some use for once you've finished the course; inside the LocoScript 2 course, for example, is a Quick Reference Guide which takes you through all the program's editing functions and shortcut cursor keypreses.

Training available from Head-line Communications on 0432 271598





Left, Pamela Price, Director of Studies at Wetherby-Price Training, proudly displays one of her diplomas. Below, Locoscript training in action

The Professionals

Hiring someone to give a day's on-site instruction on a one-to-one basis is expensive but you do get a lot in return. You can expect to pay something in the region of £200 for six hour's training; the first one and a half hours might cover basic operational procedures, the second all the basic packages used on the machine in question. The last three hours might be spent just looking at one particular package of your choice. Often the trainer will leave all the course ware behind afterwards and in some instances you can choose whether you want to record the training you receive

the students have a problem, all they have to do is stop the tape and ask us for help."

Pam is at the centre all day, along with two other supervisors, to answer any questions that the trainees can't sort out for themselves. There are just two PCWs and two PCs available on the premises. It may not sound like many but the advantage of this is that if you have a question to ask, you don't have to waste your time, and your money, waiting to see someone. As soon as you turn around, Pam or one of the other supervisors is there to help.

Runaway training

As far as the PCW alone is concerned, Wetherby Training offer courses in LocoScript 1 and 2, WordStar, dBase II, SuperCalc and Sage Computerised Accounts. Beside each PCW is a cassette player to which you are hooked up via a pair of headphones. Using the cassette (which you can rewind and fast forward to your heart's content) together with the course manual, you slowly but surely work your way through the package.

One of the trainees found that the LocoScript 2 course she was doing on the 9512 was needlessly wordy: "Instead of letting you get on with it, you've got a lot to listen to," was her complaint. The courses are undoubtedly very thorough and if you've already gained a modicum of experience, it's possible that they may seem a little too thorough.

At the end of each of the word processing courses is an exam. It's about two hours long and in return, you get a very presentable-looking diploma which provides a future employer with proof of what you've done. "The exam", says Pam, "is in no way compulsory, but since it's included in the price of the course, it would seem just as well to do it – and, in fact, most people do. You're allowed to do the exam with the course manual in front of you – otherwise it's totally unrealistic. We're not trying to test your memory; we just need to know that you can access various functions when the need arises."

Hung up on the line

Pam also operates an 'agony line' for people who have finished the training but who find that the odd problem crops up once they're at home.

"Not that many phone, though, on the whole" explains Pam. "Just knowing that we're there on the other end of the phone to help gives them the confidence they need to try new things. But a word of warning for people who are paid to type from home: I would always advise them to make a copy of what they're given. Then if they make a mistake, there's no lasting harm done and in case of dispute they can provide the evidence of what they were given in the first place."

Most of the people who come into Wetherby Price Training fall into one of two categories: either they're unemployed and wanting to acquire word processing skills for prospective employment or, says Pam, they're writers.

"Most people who have bought a PCW haven't bought it for business purposes", she explains. "They've bought it because they're retired and want to do some writing. They've also bought it because it's cheap. Therefore they're not going to want to fork out a lot of money training – even if they have given up completely on the manual."

Although all the training is done on a strictly individual basis, some of the larger companies around Salisbury send several of their employees to Wetherby Price Training – on consecutive evenings, sometimes – to get to grips with a particular program.

"Salisbury District Council wanted a couple of their employees to undergo keyboard training. Another of the large firms have sent us three of their secretaries to be trained in WordStar. Salisbury Journal, our local paper, are currently computerising their production sytem and will-be sending staff down in the very near future for keyboard training. In the past we've taught some of their journalists shorthand, too," she adds with a smile.

Pam also knows from her own experience that some of the hospitals in the area – in fact the Health Service generally – are literally strewn with unused PCWs which are just sitting in corners shrouded with cobwebs for want of the skills to use them.

Child's play

Pam says, "Unfortunately, I haven't the time to go out and do on-site training at the moment. It's something that I hope to be able to do later on. Having said that, Mark, my seventeen-year-old son, has occasionally gone out at weekends and spent a couple of hours putting some people right on Mini Office Professional. We will do it if it's urgent; just tell people that it would have to be after school or at weekends!"

Pam was also eager to stress that Wetherby Price Training will try and cover any packages with which people are having difficulty. As she so readily points out, they've never yet turned anyone away. If it's a package that they don't carry themselves, then the normal procedure is to wait until there are enough queries to justify the company buying it so that they can start organising some standard training. "It's worth anyone phoning up to inquire about anything."

The good thing about a training course like this one is that it gives you the discipline of actually getting out of the

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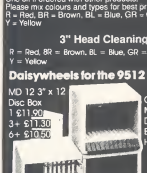

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house or office to come and do it. You can immerse yourself in a warm and, above all, quiet, library-like atmosphere and work your way through the training at your own speed. Pam pointed out that if you train at home there's always going to be something that you prefer doing instead – particularly if you're a bit stuck.

Now for all the gory details. The good news is it's not all that bloody. The LocoScript 1 course lasts eight hours and costs £70. LocoScript 2 takes slightly longer (10 hours) and costs £75. The WordStar course takes 16 hours and costs £105, while the Sage Computerised Accounts training lasts 24 hours and costs £199. Wetherby Price Training also offer more general courses in CP/M (six hours' training costs £25) and general keyboard skills (16 hours costs £50). Tuition here is both inexpensive with an approach that is refreshingly personal. ■

DIRECTORY

This list is by no means exhaustive but covers all those companies mentioned throughout the article and other main PCW training centres in the UK. As we mentioned above, prices and durations of courses vary enormously from company to company so have a good phone around before finally deciding.

Amstrad User Clubs Learning Centre
Tel: 091 510 8787/9595
LocoScript 1, LocoScript 2, SuperCalc 2, dBase

Aztech Micro Centre
173, Basingstoke Road, Reading, Berkshire RG2 0HF
Tel: 0734 461100
LocoScript

Banna Word Processing
29, New Bond Street, London W1Y 9HD
Tel: 01 493 3336
LocoScript 1, LocoScript 2, SuperCalc 2, Cardbox

Computer User Training Services
1 Winckley Street, Preston PR1 2AA
Tel: 0772 201346
LocoScript

Computext
58 Castle Drive, Horley, Surrey RH6 9DE
Tel: 0293 776683
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Tel: 01 251 1010
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Dynamic Sales and Training
47 Goldsworth Road, Woking, Surrey
Tel: 0483 756914
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Gary Hall
The Lodge, Sidmount Avenue, Moffat, Scotland DG10 9BS
Tel: 0683 20440
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PO Box 22, Hereford HR4 8UW
Tel: 0432 271598

Horsham Office Skills Training Centre
Unit 2, 24 London Road, Horsham, West Sussex RH12 1AY
Tel: 0403 211440
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Icon Communications
31 The Wells Road, St Ann's, Nottingham NG3 3AP
Tel: 0602 505499
LocoScript 2, SuperCalc 2, BASIC (Jetsam), The Desktop Publisher

John S. Blandford
15 St Albans Road, Sandridge, St Albans, Herts AL4 9LA
Tel: 0727 59913
LocoScript 1, LocoScript 2, LocoMail, Mallard BASIC

Linkom Training
32 Hill Street, Totterdown, Bristol BS3 4TW
Tel: 0272 717435
Ring for information on courses

No Hassle Computing
Tel: 01 675 3139
LocoScript 1, LocoScript 2, WordStar, SuperCalc, Cracker, Masterfile 8000

Molesey Education
Flat 3, 10 Matham Road, East Molesey
Tel: 01 941 1364
LocoScript 1 and 2, LocoFile, LocoMail

Office International
247-257 Euston Road, London NW1 2HY
Tel: 01 387 9339
LocoScript, NewWord, Cardbox, SuperCalc 2, Sage Popular Accounts, LocoMail

Off The Shelf Training Services
5a West Street, Bognor Regis, West Sussex PO21 1UB
Tel: 0243 827778
LocoScript 1, LocoScript 2, LocoMail

PS Partnership
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TACIT
1 Trinity Square, South Woodham Ferrers, Essex, CM3 5JX
Tel: 0245 325166/323178
WordStar, WordStar 2000, Word, LocoScript 1, LocoScript 2.

Techfriend
54 Kelvedon Close, Kingston-on-Thames, Surrey KT2 5LF
Tel: 01 549 7313
Ring for information on courses

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Tel: 0722 24005
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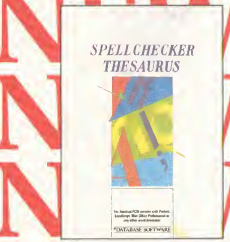

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LocoFile comes on a single disc with a manual, a free copy of Script (the Locomotive magazine) and a booklet containing all the update information and the installation procedure. The installation program is on the second side of the LocoFile disc and its main purpose is to upgrade your version of Locoscript to 2.2, which supports LocoFile. If you have Locomail or Locospell then these are also upgraded.

Since the installation program tells you exactly what to do - even a computer journalist can follow it - there is no point in going over it here. It suffices to say that the whole procedure, including finding the master discs, takes less than half an hour.

When you start Locoscript again with LocoFile installed the only difference you will notice is that the loading screen shows you now have LocoFile and everything is version 2.2. There is nothing on the Disc Management Screen (DMS) to show LocoFile is there. However, pressing [f1] for the Actions menu from either the disc management screen or while editing a document gives you Run LocoFile as an option and pressing R will put the cursor on that option.

You've nearly reached the exciting bit. When you press [ENTER] a menu box appears. From the disc management screen this contains the name of the file the cursor is on or a question mark if it isn't currently on a file. From inside a document first the DMS comes up and then a message is displayed asking you to move the cursor to the database file you wish to use.

Providing the file you choose is a database file then a box laid out exactly like a record card appears in the centre of the screen, if it wasn't a database file then an Alert box comes up with a message telling you so. To leave LocoFile simply press [EXIT] and LocoFile will save your alterations and return you to your document or the DMS.

Is this a record?

Locomotive provide several sample databases to play with so that you can familiarise yourself with LocoFile without having to create a new database. This is extremely nice of them and it is worth using one to get a feel for the program. So put the first side of your copy of the LocoFile disc in the A drive, press [f7] for a disc change, put the cursor on TIMETABL.DAT and press [f1], R, [ENTER], and a record card will appear.

Moving from one item (or field) to another can be done in several ways but the right way is by using the [TAB] key to move to the next item and the [RELAY] key to go back one item. To move backward and forward through the records use the [PAGE] and [ALT][PAGE] key combinations just as in Locoscript. [DOC] and [ALT][DOC] will take you to the last and first records respectively. When you reach the first or last record an Alert box will appear and tell you so.

You will immediately notice that using [PAGE] to go through the records brings them up in an odd order. In fact they come up in class order, that is, all the 1As, then the 1Bs and so on rather than the record order. This is because the file has been indexed on the Class item and LocoFile has ordered them alphabetically. It does this regardless of the Record order (the order they were actually put into the database).

To change the order you need to change the key in use. Do this now by pressing [SHIFT][f1]. A menu will appear with a list of the keyed items in the database. There can be up to eight keyed items in a record and in this database every item is keyed. If you change to the Teacher item then the records will appear to be alphabetically sorted on the names of the teachers.

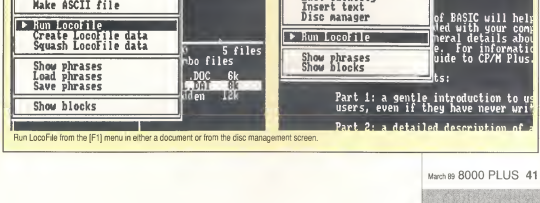
Key facts

You will see that there is a tick by the Class item. Cursor down to Teacher and press [+] and the tick will move; now press [ENTER] and you are back at the record cards. Paging through them produces a different order of appearance than before. This idea of keys is important for any database as being able to use a different key alters the way the database can be used.

For instance, if you wanted to know all the classes taken by Fraser you would make the key Teacher and use [f5], which is the Goto menu. You can now type in the name Fraser and when you press [ENTER] LocoFile will search on the Teacher key for the first occurrence of Fraser.

In fact LocoFile doesn't even need the complete name but will find it with no more than Fr as the name to search on. This search on a partial string is a very powerful feature allowing you to locate a record from incomplete information. If the record found isn't the one you want it will at least be close and you can page forward to it.

It is possible to do a search on every item in every record in a database. For example you may have a database of

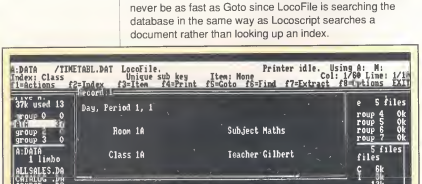


Run LocoFile from the [F1] menu in either a document or from the disc management screen.

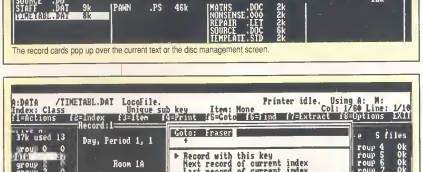
Confusion; he say

Just as you've all got used to the idea of an entry in a database being called a record and each entry in the record being called a field Locomotive have changed the rules. In their fine tradition of being different they've decided to call fields items. Only the names have changed and an item is a field is an item.

plants with a description field. You might know for example, that there exists a plant with orange berries but you can't for the life of you remember what it is. Using the [f6] Find menu simply ask LocoFile to search for the first occurrence of orange. The whole database will be searched item by item until it is found. If a record with orange in is found but isn't the one you were looking for [f6] will give you the option of looking for the next occurrence of the word. If the word exists Find will locate it. Remember though that Find can never be as fast as Goto since LocoFile is searching the database in the same way as Locoscript searches a document rather than looking up an index.



The record cards pop up over the current text or the disc management screen.



Finding a record using the current key is simple and fast.

To add a record to this file you need the Actions menu [f1] again. This time the Create New Record option is highlighted. Press [ENTER] and the record card will clear with the first item having a box after it to show where the new information will go.

Put anything you like into the box and [TAB] forward to the next item. The only item you need to worry about for this demonstration is the one labelled Teacher into which you should put Frog. In fact none of the other fields need have anything in them at all.

Once you've typed in the information on the new record any action which is going to take you to another record, back to a document or to the DMS will automatically cause LocoFile to save the record anyway. So don't worry; you don't have to do it explicitly. In fact there is no Save record option on any menu.

So move off the record, perhaps to the end with [DOC] and use the [f2] menu to set the key to Teacher and the [f5] menu to Goto Frog. The record card will appear in seconds.

You can change any record simply by paging through to the one you want and rewriting it. The previous version of the record is kept in limbo and can be retrieved but only one record is retained. The next occasion on which you alter or delete a record the previous limbo record will be thrown away and a new one will replace it.

Try altering a record and moving off it. Now call up the [f1] menu again and you will see that there is an option to Recover from limbo. If you put the cursor on this and press [ENTER] the limbo record will replace the altered one or, if it was a deletion, reappear. You can confirm this has happened by paging back through the records.

Playing safe

It's perhaps worthwhile to bear in mind that complete database files are not kept in limbo if erased, so once erased they are lost. As always with database files it is important to keep backups for when the accident that won't happen to your disc eventually does.

You've now opened a LocoFile database, learned how to move around the items in a record, browsed through the records, altered a record, deleted a record, recovered it, written a new record, performed a search on the database in two different ways and know how to return to your document. If you've ever used another database in CP/M you will be pleasantly surprised at how easy it has been to get at this one. The last thing you're going to do in this session is to move information from the database into a document.

Create a document on M. It doesn't have to have anything in it for now but perhaps it might be a letter to your child's school lamenting the lack of emphasis in the teaching of mathematics. At the point where you want the teacher's name invoke LocoFile. The menu you need is Extract which you get by pressing [f7]. You are now offered the chance to select or deselect any of the items in the record card by placing the cursor over it and pressing [+] or [-]. Now you need to decide into which of LocoScript's blocks you want to paste the information; lets choose number 7, and with everything to your satisfaction, press [ENTER] then [EXIT].

LocoFile will return you to your document at this point. The information you've selected can now be entered into your document with [PASTE] 7 and the item selected; in this case the Teacher item will be pasted in at the current cursor position.

There is an option on the [f7] Extract menu to Select All, in which case the entire card would be pasted into the document. The layout is that items on the same line are inserted in the same line in the document but separated by tabs while items on different lines are separated by carriage returns. The way these items are inserted can be important with multi line items in a record and we will consider this further in a future article. ■

Faster locomotive

Database files can be copied to M, if you have the room, and worked on there. This speeds things up but means you have to remember to copy the database file back to disc if you change anything during the course of the session. If you don't your changes will be lost when you turn the machine off.

The key to understanding

You may be a little confused by all this talk of Indexes and Keys but it isn't so difficult really. Imagine you are reading a book on Mediaeval History and want to find out if Camelot is mentioned in the book. You would turn to the index at the back and look down through until you reached the C's. If Camelot was there then there would be a page number by it and you could turn straight to the page.

Locofile keeps an Index of each item that has been made a Key along with the datafile. In the TIMETABL.DAT file every item in the record has its own index so there is an index with all the entries under Teacher, one with all the entries under Classes, another with all the entries under Subjects and so on. When you change the key in use you effectively change the Index that Locofile is using to look up the record.

DEATH OF A SALESMAN

Buying something of which you know nothing isn't easy. We went out to investigate how far you can rely on the person selling it to you.

To the uninitiated, the world of computer purchase can seem as daunting as navigating an uncharted ocean. Often the only guide through such treacherous waters is the hovering sales assistant hoping to get rid of something. The faith of the prospective consumer in the salesperson involved can consequently be quite touching and its degree is often directly proportional to his or her own level of ignorance. But to what extent can the salesperson be trusted to help?

The purpose of 8000's big day out in the city was to investigate whether such faith is justified. With a fixed expression of non-savvy on our faces and armed with the certain knowledge that we required a machine (although we weren't sure which one) to assist us with a major writing project, we went in search of 'help'.

'Help' first materialised in the form of a shop assistant who looked so young he could almost be a policeman. 'Can I help at all?' he asked while the PCWs looked down on us with a distinct air of superiority.

We informed him that we were writers. A very good friend of ours had recommended her PWC – or whatever it's called – although we couldn't actually remember which 'number' it was. What exactly is the difference between them, we asked helplessly.

The assistant nervously ran a finger round his collar, but seemed to take heart in noticing the vacuous expression on the face that was looking expectantly into his.

'Well', he explained, 'the main difference between them is the size.' He went on to explain that the difference between the PC 1512 and the PCW 8256 was the 20 megabyte hard disc of the former compared with the 256k of the latter. When we looked blank and asked him to explain what that meant, he threw a drowning glance over at his 'colleague' who was lamely stabbing at the keyboard of a PCW 8256 in the presence of a mildly disgruntled-looking customer. This was apparently the resident expert.

We then asked him what program his colleague was using. 'Oh, that's LocoScript', he added eagerly, sensing a reprieve. 'It's just a beginner's program to get you going – you can't really do anything 'proper' with it.'

Colour Blind

Changing tack slightly, we asked if any of the PCWs had got colour screens. Unable to offer any whole-hearted assent, he informed us that they might be getting some colour 8256s in next week. He scuttled off to attend to a ringing phone that was mercifully claiming his attention.

We settled down to watch the expert in action. It soon became clear that he was having a spot of bother. Even from our undistinguished vantage point, we could see that there was little point in trying to create a document on the disc when the write protect tabs on the disc were still down. We beat a hasty retreat leaving the 'showcase expert' still stabbing blindly at his uncooperative machine.

The second shop that we decided to investigate seemed altogether more promising. This salesman got off to a convincing start. His theory was sound, his comments helpful, and he reached new heights of informativeness when he told us that, unlike the PC, the PCW was sold as a package of keyboard, printer and monitor.

We asked him to give us a quick demonstration of LocoScript. After five minutes of prodding around ineffectually on the machine, an uncomfortable-looking flush spread over his face.

'There's no room on the disc to create a document and we haven't got another one here', he informed us briefly and braced himself to repel the next attack. It was not without some effort that we stopped ourselves from enlightening him: opening a file would be easy – he would just have to do it on M before saving it to another disc.

By the time we'd told him that we were also hoping to use the computer to help us run our small business, he had lapsed into total silence. It was obvious that he knew nothing about business software apart from that it existed. We'd seen and heard enough.

QED

Our final port of call was an altogether more positive encounter. This chap knew his facts and his figures off by heart. He was also aware that the 9512 yielded a much more professional printout than its smaller cousins and didn't try fobbing us off with a PC. 'If you're buying your computer for writing, then the PCW is just as good as a PC. It was originally designed to cope with nothing else but text,' he added encouragingly.

He was the only salesman we met that day who confessed to not knowing LocoScript all that well. Despite that, he was able to give a perfectly adequate demonstration of all its salient facilities.

Our spirits lifting visibly, we asked his assistant if we'd be able to play any games on the PCW. 'Oh no,' she replied as if sensing our rising optimism 'the PCW isn't a games machine. There aren't any games out for it at all.' She seemed convinced even if we weren't.

There you have it. Good reliable advice, it would appear, is not easy to come by. If you're thinking of buying a PCW, or any other computer, yet don't know much about them, get genned up before you go. Interestingly, despite the mass of sales literature put out by the Amstrad publicity machine, we couldn't get any at all. When we did ask where we could go to get further information, the response was unanimous: 'Oh yes, try one of those Amstrad PCW magazines; they'll tell you anything you need to know ... '.

Avoid confusion; when shopping for a computer do your own research.

Business ...

There is an enormous range of business software available to run on the PCW, much of it left over from the days when CP/M was the standard business operating system for a whole range of machines

.. before Pleasure.

Despite all kinds of assurances to the contrary, there are a vast (and steadily) increasing selection of games that you can run on the PCW. Have a look at page 14 of issue 27 (December 88). And, just for the record, the PCW has never boasted a colour screen

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TRY A YELLOW RIBBON

Go for rainbow-tinted printouts with the latest in designer ribbons for the PCW.

If you find yourself itching to break the mould of black and white printout so beloved of word processors, you will be pleased to hear that there are now a range of colour ribbons available for the PCW to help you do just that. Judging from the 8000 Plus mailbag there are a few of you out there who have taken the plunge with all sorts of lurid colours brightening up your prose.

Using colour ribbons can be a fun and imaginative way of individualising all your PCW output, especially if you can combine them with different fonts, character sizes and even shades of paper, not to mention making the most of special effects like emboldening and italicising. You can be sure that people are going to sit up and take notice of colour-coordinated correspondence even if the content leaves something to be desired.

Colour ribbons are inexpensive (about £5.00 each regardless of which machine you're using and no more than about 50p dearer than the standard black) and are used in exactly the same way as the standard ribbon cartridges. They come in red, green, brown and blue so although you can't quite write a rainbow you can manage a lot more than just overdue invoices.

If you intend to use a number of different colours in the course of one document, it's obvious that you're going to have to exercise some very careful control over the [PTR] key so that the right colour is inserted at the right time. That's if you have no way of automatically stopping it during printout. Users of Protext would simply insert the line: **>WT** and when printing stops simply change the ribbon before pressing any key to resume; simple.

Nearly as straightforward is Mini Office's word processor. Just insert the special [ALT]/[Z] code at the point in the document where you would like the printer to stop so that you can change ribbons. Then, as before, just press any key to resume printing. If your word processor doesn't have this facility then practice, as they say, makes perfect.

As with desktop publishing techniques, it can be a mistake to abuse a good thing. Overuse merely serves to reduce the impact of a feature. The bottom line is that if you're preparing a moderately important document, plan it well away from the machine before you start so that you don't get carried away.

A Refreshing Change

Caspell Computer Services have recently developed a product called Ribbon Refresh. It's basically an aerosol spray designed to re – ink faded fabric printer ribbons. All you have to do is lift off the top of the ribbon cartridge with a screwdriver and spray the ink over the ribbon inside.

A fine straw-like appliance included with the aerosol, fits onto the nozzle so that you can spray all the tricky bits. Don't forget to wind the ribbon on a little way to cover all of it and then leave it for about twenty-four hours so that it can sink in evenly.

Printing after that should be clear and black. If it's too black, then use draft quality for a little while until the excess ink has been used up.

Ribbon Refresh can be used more than once on any kind of ribbon fabric and providing you use it sparingly (which you're recommended to do anyway) it should last for upto 30 sprays.

Ribbon Refresh retails at £8.95. Phone Caspell Computer Services on 0202 666155 for further details.

Graphic Detail

Perhaps the most impressive use to which you can put coloured ribbons is in printing out graphics with the help of some appropriate software.

The first thing to do is create a skeleton drawing of the picture you want to create in the usual way. Then allocate your ribbon colours, remembering to create a separate file for each colour that you intend to use in the picture. One file, for example, will contain just the parts of the picture which will be reproduced in red. The next file will contain all the parts to be coloured blue, and so on.

To produce the final effect, all you have to do is overprint all the files. Each file superimposed on the one before slowly creates the whole picture. By the way, it's a good idea to use continuous stationery so that you can roll the paper you're using back into the printer at exactly the same place each time. This is a very tricky operation with single sheet stationery.

In the black

Single strike carbon film ribbons produce the crispest print but only only come in black (carbon, you see) so if it's a really professional, slick-looking document you're after – to the bank manager, say – they're the ones to go for.

● *Our thanks to RSC Ltd who supplied the ribbons. Tel (0923) 243301.*

BASICALLY GOOD

CP Software's Lightning Basic went where Mallard had never been before.

For most PCW users programming is something they do ocassionally; like drinking to excess they can take it or leave it, quit any time they want to, it's just that they don't want to.

Inevitably most of this programming is going to be in Mallard Basic simply because they aren't addicts and don't need the latest shiny new B-tree libraries in C before they can sleep easy at night.

Mallard Basic is certainly the fastest interpreted Basic around and will even outperform some compiled languages. But Locomotive designed Mallard Basic for business use, hence the plethora of file handling commands, rather than as a PCW specific language. In fact Mallard Basic is quite capable of running on any CP/M machine with just a few bytes changed to reflect the different screen size and one or two more for things like the codes returned by the cursor keys.

The problem for PCW users is that making the language portable has meant ignoring the special features of the PCW screen (in fact Mallard Basic was written well before the PCW arrived on the scene). Because of this ancestry Mallard Basic can take no direct advantage of the bit mapped graphic screen or the banked memory of the PCW. It can't even directly access the system clock.

So what can you do if you've already taken the plunge and learnt Basic, if the intricacies of the PCW innards and assembler don' t appeal? The only sensible solution is to buy the bolt on bits that Basic needs to do the kind of things that programmers on many other machines get to begin with.

CP Software appear to know as much about the inner workings of the PCW as anyone could. They've proved this with their other programming product All You Ever Wanted to Know About Graphics the Universe and Everything. Lightning Basic seeks to add all the extra facilities that Basic programmers on other machines take for granted, and they had already succeeded with the first release of Lightning Basic; so why issue an improved version of something that already works so well? The answer seems to be that they have found a few more hoops for the PCW to jump through.

I've found the last bug!

And if you haven't, CP software have given you yet another way to track down that elusive many legged beasty. The power of the TRON command has been enhanced. TRON on its own is the same but with a number between 1 and 254 after it it slows down. 1 is fastest, 254 slowest. As you might expect 255 stops your program althogether until a key is pressed. If the key is a 'V' then all the variables are listed before the program continues.

For those of you forever ending up with misbehaving programs (surely not because you program straight onto the machine?) the new TRON can help you find a way through the spaghetti

Extra extra

Now renamed Lightning Basic Plus the new commands are, in the main, given the prefix #z, which wasn't used in the earlier version. These commands include a string search, an Ascii string search, circle and ellipse drawing, polygon drawing, irregular polygon drawing, a pixel test, a pixel on/off test and a command to change the screen backround colour (not just a reverse). One odd one out is #q, which will now return the amount of free space on the currently logged drive

A few existing commands in Mallard have been altered, for example the POS() instruction; this wasn't all that useful in Mallard originally as it didn't return the cursor position. The command POS(1) will now return the cursor row and POS(2) returns the cursor column.

But the single greatest tecnical achievement is undoubtedly the #RUN command which allows .COM programs to be run from within a Basic progam. You can now have lines like:

```
10 IF UPPER$(INPUT$(1)="Y" THEN #RUN "SHOW.COM"
```

When the .COM file has finished its work it doesn't return to the CP/M prompt as you'd expect but to where it started in Basic allowing your program to continue as if nothing extraordinary had happened at all.

Being able to use the CP/M utilities from within Basic can save a great deal of effort when writing programs and of course it isn't only the utilities that can be used; any .COM file smaller than 32k will run apart from a few that do really low level machine access like Disckit.

So how does Lightning achieve these tricks, and more to the point, how do you use them?

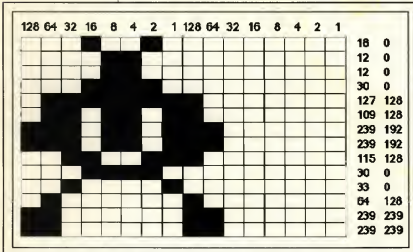
Inside story

There is a rarely used instruction in Basic which you may not even know about; when you say x = 100 you are really saying LET x = 100 but the LET is simply assumed. It still works and you can use it if you want. Lightning have hijacked this command and use it as a gateway to their own set of commands. To show it has been altered they've made it LEB instead. Although you can use the hash symbol instead of LEB as a shortcut in your programs whenever you LIST them the hash sign will be printed as LEB.

All these extra commands actually sit at the top of the memory in modules; there can be up to three. Light1 is the module with the easy bits in and the module to be loaded if you just type BASIC LIGHT to begin with. This takes up about 2.5k. Each of the modules loads under the existing one and takes up a little more space.

On our office 8512 with just Basic loaded there are 31597 bytes free; with Light1 loaded this is down to 29046. Light2 reduced it to 25138 and with Light3 there were 19699 bytes free for programs. However, a program to fill 19k (without large arrays) would represent quite a lot of effort so this isn't any real barrier to using the additional modules.

Light1 includes the routines to plot and unplot pixels and draw lines. A great deal of graphic work can be done with no more than these. However, it is the icons and sprites that generally get everyone excited. A sprite has been used in the listing to show how to invoke them.



The sequence of numbers for this sprite are 2 (for the number of bytes wide), 14 (for the number of bytes high)

The new commands available under Lightning Basic Plus allow a program as short as this to perform quite sophisticated actions. This listing draws a stop-watch and uses the internal PCW clock to synchronise the movement of a sprite from one second marker to the next.

```
10 REM stop watch by steve patient
20 x=180:y=128:REM center of low res screen
30 LEB cls:LEB disable:REM clear screen and disable cursor
40 LEB gmedium:REM set screen to 360 by 256 resolution
50 LEB ze,x,y,112,123:REM draw ellipse (rather than circle)
60 LEB zc,x,y,5:REM blob in center
70 angle1=(2*3.1415)/60:angle=angle1:REM 1/60 of circle
80 POKE 55789!,2,9,24,0,126,0,126,0,255,0,255,0,255,0,126,0,126,0,24,0
90 POKE 55809!,2,9,24,0,60,0,126,0,126,0,231,0,126,0,126,0,60,0,24,0
100    LEB isprite,2:REM initialise sprites before using them
110    DEF FNtime(q)=PEEK(q)-INT(PEEK(q)/16)*6:REM get time function
120    FOR count = 1 TO 60:REM draws the minute divisions
130    radius=100:REM inner circle size
140    xoff=(radius*COS(angle))+x
150    yoff=radius*SIN(angle)+y
```

Icon see you

First off we'll think about icons since they're easier to understand than sprites. Icons are character based and are made up of UDG's, which stands for User Defined Graphics. All this means is that part of the internal PCW character set is redefined. Each internal character is displayed as an 8 x 8 grid of pixels. These are held in the PCW character matrix as eight bytes, each byte representing one row of character. To change the shape of a character you need to change the number held in each byte. Lightning basic provides a command to do just this called LEB UDG.

Let's say you wanted to change the character 7/8. This is the character 185 as you can see from the list of characters in the CP/M manual. To work out the shape you need to understand that it's the binary representation of the number that counts. Where there is a binary 1 a pixel will be turned on on the screen and where there is a binary 0 the pixel will be turned off.

The command 10 LEB UDG, 185, 255,129; 129,129,129, 129,129, 129, 255 would change character 185 to a rectangle. If the next line is 20 CHR$(185) a rectangle will print out. The 185 is the first number in the command; the number 255 is binary 11111111 and provides the top and bottom of the rectangle. The number 129 is binary 10000001 and gives the sides.

Icons are a collection of four UDGs arranged as a square. To create an icon, define the four UDGs that will make the shape. These have to be consecutive in the character set and will be arranged on the screen as follows:

12
34

Now you need a line like 50 LEB CICON,1,185 where 1 is the icon number and 185 is the first UDG. That creates the icon, but you have to name it to use it. 60 LEB NICON,185 would make the icon just created the active one, causing all future icon comands to refer to it until you changed it with another LEB NICON command.

Sprite enough of that

Creating a sprite is straightforward once you've grasped the way characters are shaped using their binary representation. Unlike Icons which are a part of the character set the numbers which represent the sprite shape have to be poked into a specially reserved part of memory beginning at location 55789.

The sprite must be an exact number of bytes high and wide - you can't poke in less than a complete byte. Once the data for the sprite has been entered it must be initialised. This is done in line 100. The command to place the sprite on the screen is LEB psprite n,xx,y where n can be from one to eight despite what is says in the manual.

The only restriction is on the amount of memory available for sprite data which cannot exceed 388 bytes. The value of xx is the number of pixels across the screen and y will be the number down. This is the point at which the top left of the sprite will be placed; for that reason the offset in the listing has to be changed in line 240 to keep the sprite looking as if it circles the original centre. To erase a sprite use LEB xsprite,n which erases the sprite with the number n from its last position.

To define a sprite the width and depth are specified and then the actual bytes which constitute the shape. The next sprite has to be poked in beginning at the next higher free location.

The manual says the six bits on the far right of a sprite have to be left empty because of the way Lightning moves sprites. In practice it isn't much of a restriction. It's the bit pattern which is important. The number to poke is derived from the bit pattern of each byte by adding up all the values represented by each turned on bit. This is shown in the diagram. ■

```
160 radius=110: IF count MOD 5=0 THEN radius=105
170 xoff1=(radius*COS(angle))+x
180 yoff1=radius*SIN(angle)+y
190 LEB linedraw,xoff,yoff,xoff1,yoff1
200 angle = angle + angle1
210 NEXT
220 LEB at,1,43:PRINT 60:LEB at,30,43:PRINT 30;
230 LEB at,16,13:PRINT 45:LEB at,16,74:PRINT 15;
240 radius=95:x=354:y=123:REM set up new origins for hires screen
250 WHILE(1):REM put sprite on screen and move every second
260     angle=FNtime(64504!)*angle1
270     temp=FNtime(64504!)
280     xoff=(radius*COS(angle))*2+x
290     yoff=(radius*SIN(angle))+y
300     LEB psprite,1,xoff,yoff:REM Put sprite
310         WHILE(temp=FNtime(64504!))
320         WEND
330     LEB xsprite,1:REM eXorcise sprite?
340 WEND
```

Now you see it

There are three main differences between sprites and icons. The most obvious is that icons preserve the background while sprites stomp all over it; the second is that icons must be 16 by 16 pixels while sprites can be much bigger and the third is that sprites can be placed with pixel accuracy while icons must occupy character positions.

To sum up, sprites move elegantly but wear big boots while icons move lumpily but look where they're going.

Hairiest hackers only

If there are commands you wished Lightning had but which are missing then write them yourself. Provision is made for eight user functions. Since the author of Lightning Basic just can't stop adding goodies he's already filled these up with, for example, routines to scroll the screen by any number of pixels, a screen blank routine, a Basic deprotect routine and others; but change them if you want.

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511171	PCW8256/512 PCB, Keyboard	£21.95	£26.95
500771	PCW8512 PCB, Keyboard	£21.95	£28.95
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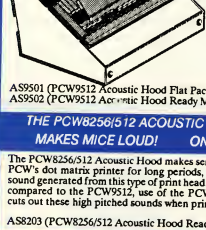

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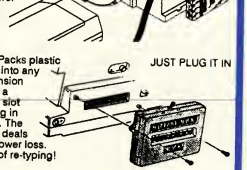

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PROBING PROTEXT

Applications programs that include their own programming language are the up and coming thing in the PC world – but Protext got there first.

Almost everyone has now heard of mailmerge, where one master document is used to produce several different documents automatically, but some word processors go way beyond this. Protext is one word processor that comes with a virtually complete, text oriented, programming language.

If you often find yourself having to perform the same time consuming series of actions while word processing then it's time you became a bit more adventurous and learned how to extend the power of your word procesor.

While LocoScript users might have some trouble with this that happy band of Protext professionals have some really powerful magic hidden away in their word processor. Exec files and the in-line text commands (those beginning with a > symbol) can appear mysterious, even arcane, but, in concept at least, they are quite straightforward.

An Exec file is a program which Protext will run from the command line when told to in exactly the same way that Basic will run a program. Any instruction you can type on Protext's command line can be put into an Exec file and made to run automatically.

The big difference between Protext and Basic it is that the commands available within Protext tend to be oriented toward the things a word processor user might want to do. Rather than offering a general purpose language Arnor have produced a dedicated text handling language.

The first thing to grasp is that an Exec file is just like any other file written and saved by Protext. To prove the point, use Protext to create a document (or rename an existing file) on A: called ORCS.DOC . Now write this:

```
l a:orcs.doc
```

Save this file under the filename ORCLOAD.EXE. The .EXE filetype isn't essential; the only reason for using it is to help you remember what kind of a file it is when you do a DIR. If you now type **exec orcload.exe** at the command line Protext will obey the instruction in the file.

You will see the line in the Exec file appear at the command line and the file ORC.DOC will be loaded just as if you'd typed in the command yourself. It is important to have a return after the line in the file just as you would at the command line otherwise it won't work.

What's your number?

An Exec file can have as many commands in it as you like including keystrokes such as [STOP] or [RETURN]. The way this works is that Protext stores a specific number for each key as well as for the key in combination with [SHIFT] [EXTRA] or [ALT]. These are known as the key translations.

For example, if you wanted to put a Save command in an Exec file you need a second return since the Save command prompts you with a filename and needs a second return to confirm it. The first return comes at the end of the line anyway but for the second one you need to add the code for the [RETURN] key. This makes the complete line save|13| with the |13| providing the second return.

Let's make an Exec file to do something a bit more ambitious; load a file, move to the end of it, merge another file in with it and then save the result. Let's assume you already have the two files FRODO.DOC and HOBBIT.DOC on A and want to combine them to form MORDOR.DOC on M. The Exec file you need will look like this:

```
load a:frodo.doc
|252||29||29||13||252|
merge a:hobbit.doc
save m:mordor.doc|13|
```

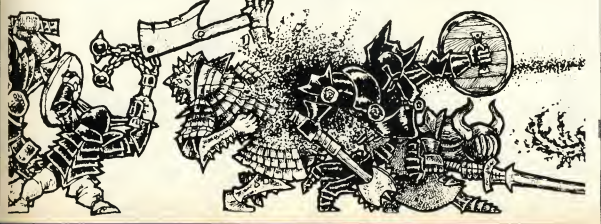
The way most of these lines work is quite straightforward even though it may look forbidding; load a:frodo.doc does just that, it loads the file, but the second line needs explaining in detail.

The vertical bars either side of the number tell Protext to treat it as an escape sequence rather than as simple text; the way to get vertical bars is with [EXTRA] and a full stop. The |252| is the code for [STOP] and puts Protext in edit mode. The |29| is the code for [ALT], which takes you to the end of the document; there are two of these in case the document is too long to go all the way through in one go. The |13| simply ensures that the next file begins its merge on a new line and the final |252| takes Protext back into command mode.

Letter's begin

All that remains now is to merge the second document, which is done on line three, and to save the result (not forgetting the extra return using |13|). This technique could be extended further, using the Exec file to erase the old files once they'd been merged and saved.

A practical use for this technique would be in archiving your Play-by-Mail letters. If each week's letters are numbered TROLL1, TROLL2 and so on then an Exec file



Ambiguity resloved

It isn't possible to work with ambiguous file names in Protext but file names can be treated as variables. This allows the names of a series of files to be generated inside a loop by altering the variable that represents the filename.

Command centre

Protext is extremely flexible as regards commands and if you'd like a new one then just write it. For example a command to delete paragraphs would be fun and is as easily done as said.

The key to this is the phrase command. Absolutely any sequence of keystrokes can be allocated to an [EXTRA] key combination. The sequence you need to delete a paragraph is [ALT]< followed by [SHIFT][+] then [ALT]> and [SHIFT][+] again. With the paragraph marked out [CUT] will delete it. To use the [Q] key (why not?) for this just go into command mode and type key q ^218^^233^^219^^233^^232^ and press [RETURN]. Now, whenever you press [EXTRA][Q] the paragraph the cursor is in will disappear.

Protext uses an up arrow, [EXTRA] U, as the escape character when assigning keys from the command line but the vertical bar when doing the same thing via an Exec file.

Features of range

For anyone thinking of buying another machine, or who simply has to use one, it's nice to know that Protext is now available across a wide range of computers.

Protext can now be bought for the CPC machines, the PCW, the Atari ST, the Amiga and the PC giving file compatibility and user familiarity across more machines than just about any other word processor.

can be written to merge all the letters up to some number greater than the number of letters you are likely to write. If, for example, you write up to ten letters a week, set up your Exec file to TROLL20; the extra merge commands will simply generate error messsages and be ignored.

If the last command is to save the combined file but without supplying a filename the Exec file will stop and wait for you to give it one. At this point you would call the archive file something meaningful like 1JQ-TROLL.LET and save it to disc.

Even more fun is to use an Exec file to set up a lot of phrases. Being able to type [EXTRA]i instead of 'The International Institute for Middle Earth Studies' makes life a lot easier. All you need to do this is a file with the following lines (or something like them).

```
key i "indescribably evil"
key m "maleficant enitity"
key v "vile, malodorous"
key b "batwinged, horrible"
```

You can keep an Exec file full of key definitions for different scenarios and run whichever one suits the world your current adventure game is set in.

Outward bound

If Exec files are combined with files of stored commands then very powerful programs can be created to perform complex functions from within Protext. Let's consider a simple one designed to build a data file listing the names of your daemonic horde and the God they give allegiance to.

The first thing you need is a routine to write data to a file using the stored commands of Protext. Write the following lines and save them as NASTY.MAS (or another filetype which distinguishes them from ordinary documents). This file should be on A.

```
>CO daemon data
>WF daemon.dat
>RP
>AV "Daemon ",name
>AV "Master ",master
>WF daemon.dat a
>WF on
!name!
!master!
>WF off
>UN name=""
>ST
```

Now you need an Exec file to call it up. Key in the one below and save it under the name NASTIES.EXE.

```
l a:nasty.mas
m:
prints
```

In use NASTIES.EXE loads the file NASTY.MAS and then sets the default drive to M. The first command loads the file above, the second one sets the drive to M and the **prints** tells Protext to print the file to screen. This causes all the embedded commands in the loaded file to be obeyed. With these two files on A the process is begun by typing x a:nasties.exe.

You will now be prompted with `Daemon`, type in the name and press [RETURN]; next `Master` appears and waits for you to type in a name. Each time a pair of names is accepted they are printed to the screen as well as the file DAEMON.DAT to confirm the action.

When you press [RETURN] without putting a name in at the `Master` prompt the process terminates leaving the cursor on the command line waiting for you to do something else.

Obviously this way of creating a simple data file is no easier than simply typing it in except that the prompts help to keep your mind on what should be going in. But if there were eight or nine items to each record, entries for Strength, Magic, Weapons, Cunning, Intelligence, Initiative and Leadership (to name a but a few), then a data entry program becomes a lot more useful.

This data can even be checked as it's entered, greatly increasing the value of the program. Consider the lines:

```
>WF m:orcgame.dat
>RP
>AV "Daemon "  name
>AV "Master "  god
>AV "Intelligence "  int
>IF int>10
>SV int=0
>EL
>WF m:orcgame.dat a
>WF on
!name!
!god!
!int!
>WF off
>UN name="quit"
>ST
```

The first line creates the file data ORCGAME.DAT on M ; the second line begins a loop using the RP command. You're then asked for three variables, the daemon name, the name of the god to whom it owes allegiance and the intelligence of the daemon.

The clever bit is the IF command which checks that the variable is 10 or less. If it is, then the SV command is ignored but otherwise the variable int is set to 0. Using IF, values can be checked for range and given an impossible value if outside them; this makes it easy to spot errors in the final data file.

Now ypu can safely key data in ready for the next game of Empire of Erewhon without worrying that your files are going to be cursed with the dreaded erroneous data. ■

Thanks to the Games Workshop, Nottingham for use of illustrations.

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VISA

3"5" INTO

Out of the PCW into the PC; flying files down the wire with Adrian Wilkins

Last month, we looked at how the PCW owner who has run out of "oomph" can move up-market to a PC, be it IBM or a true compatible such as the Amstrad PC1640. Once you've understood the differences between CP/M and MS/DOS (their respective operating systems) and emptied your wallet taking the plunge, only one thorny question remains: how to transfer all or some of the existing work from one machine to the other so as to avoid keying it all in again.

Now we all know that the PCW's 3" discs don't fit into a PC. And even if they did, MS-DOS wouldn't be able to read them. If it could, the new software probably wouldn't be able to interpret them anyway. Adding a 5 1/4" disc to the PCW remains a viable option. But, be warned, it will set you back a good £150.

Or alternatively ...

A very much less expensive solution is to set up a communications link between the PCW and PC, and using good cheap public domain or shareware software, transfer the files fully error-checked. Provided you are able to wield a miniature soldering iron, the total outlay could be as low as £20, although you must have a serial interface on your PCW before you can start. One bonus of this is that you end up with a cable that can be used with most modems, either from the PC or the PCW.

This is what you will need:-

1. A length of 4-core cable, preferably multi-stranded twin twisted pair, but an ordinary telephone cable will do at a pinch. Don't go overboard with the length. Comms work better with short cable runs, so stick to 3 metres if you can, and don't exceed 30 metres under any circumstances.
2. Two 25-pin female D-type RS232 connectors, available from good radio shops, or by mail-order from Electromail.
3. Soldering iron and solder.
4. The public domain package MEX for the PCW, and the shareware package PROCOMM (version 2.4.2) for the PC (both available from PDSL, Crowborough, Sussex).

Make up the cable as follows: firstly chop off about 30 cm and strip out the individual wires – these are to make links on each connector. Then strip about 4mm from each strand of the main cable and connect as per the table below.

PC end	colour	PCW end
pin 1	green	pin 7
pin 2	yellow	pin 3
pin 3	red	pin 2
pin 4	blue	pin 5

Using a few centimetres of one of the link wires, connect together pins 1 and 7 on the PC end. This is most important because the RS232 signals are voltage referenced to zero volts, and since the PCW only has a 2-wire mains connection (i.e. no earth), the 0-volt rail can float unduly and cause problems. Making this connection effectively grounds the two machines together.

The next section is optional, but permits the cable to be used with comms software that requires a hardware handshake, or indeed with modems that operate in a similar fashion:

PC end: (2 links)	Interconnect pins 4, 6 and 8
PCW end: (3 links)	Interconnect pins 5, 6, 8 and 20

Mex 'n' match

MEX has been featured before in Issue 19 (April '88, page 69), so follow the instructions given there. When you have loaded MEX you have to set up certain parameters using the STAT command.

The important ones are LF:off, CRC on, CHECKSUM off, CIS off, XON on, EXTEND off, and PAGE 29. If you have to change many from the default setting you can "clone" a new version of MEX onto your PCW disc so that they are preset next time.

When you have done this, type SET 1200 to configure the serial port. Note that MEX ignores, indeed overrules, any setting of the serial port that you may have done with SETSIO previously.

On the PC, follow the installation instructions on the Procomm disc, and if you can bear it, print the instruction manual which runs to several hundred pages (it is in Epson-compatible form). It will be worth your while to spend a few hours familiarising yourself with the program. Note that typing ALT and f10 gives you the HELP menu.

Procomm is configured for what we wish to do through the SETUP menu reached by typing ALT and S. There are several things to do:

a) Then set up the terminal (option 2 from the Setup menu). To change any selection, type the option number and then use the space bar to rotate through all the options that are

```
[MEX] A0>>help help

The HELP command with no arguments prints out a list of available help
subjects (as you've probably guessed by now, since you are indeed read-
ing this).  The HELP.MEX file must, of course, be located in the drive
and user areas as specified in your overlay configuration.

Help will print a list of available topics.  To see this list, do this:

                        HELP ?

To query the HELP database for any of the selected topics, do this:

                        HELP <topic-name>

for any topic-name displayed by "HELP ?".

In general, HELP frames explain syntax with the use of the '[' and ']'
characters (which denote optional items) and the '<>' characters (which
indicate a data-type, such as <filename> or <string>.

You may move freely among drives/user areas while the HELP file is opened;
MEX will remember where to find it.

Once opened, the HELP file will remain open for the duration of the
session, unless a LOG command is executed.
```

Help facilities can be even more crucial with Comms packages than with any other and MEX doesn't let you down, it has 52k of on-line help available.

3"5" ..WILL GO

```
                    ProComm  Help

  MAJOR FUNCTIONS          UTILITY FUNCTIONS        FILE FUNCTIONS

Dialing Directory . Alt-D  Program Info ..... Alt-I  Send files ..... PgUp
Automatic Redial.. Alt-R   Setup Screen ..... Alt-S  Receive files ... PgDn
Keyboard Macros ... Alt-M  Kermit Server Cmd. Alt-K  Directory ..... Alt-F
Line Settings ..... Alt-P  Change Directory .. Alt-B  View a File .... Alt-V
Translate Table ... Alt-N  Clear Screen ..... Alt-C  Screen Dump .... Alt-G
Editor ............ Alt-A  Toggle Duplex .... Alt-E  Log Toggle .... Alt-F1
Exit .............. Alt-X  Hang Up Phone .... Alt-H  Log Hold ..... Alt-F2
Host Mode ......... Alt-Q  Elapsed Time ..... Alt-T
Chat Mode ......... Alt-O  Print On/Off ..... Alt-L
DOS Gateway ..... Alt-F4   Set Colors ....... Alt-Z
Command Files .... Alt-F5  Auto Answer ...... Alt-Y
Redisplay ........ Alt-F6  Toggle CR-CR/LF .. Alt-F3
                           Break Key ........ Alt-F7
```

Shareware package, Procomm, has no manual but its comprehensive help panel covers all the key combinations you're ever likely to need.

available.

b) Configure the General setup (option 4 from the Setup menu). The setting for item 1 will depend on which PC word-processor you have.

c) Set up your Host Mode. Note that upper and lower case distinctions are relevant when specifying the pass word.

d) Choose the "S"ave setup to disc option before exiting the Setup menu.

Lastly type [ALT] and [P], and choose option 8 to set the comms line to 1200 baud, and option 24 to save this information for next time.

Are we sitting comfortably?

Suppose we have a Locoscript file on drive B in group 1 called PCWTEST.LOC. We have already converted this to ASCII, the resulting file being called PCWTEST.ASC in the same group. CP/M is now booted up, and MEX is run. Meanwhile on the PC, PROCOMM is loaded. Just follow these steps:

On the PCW, at the MEX>> prompt, type T and press [RETURN] to enter terminal mode.

Back on the PC, if you want your files to be stored in a different directory to Procomm, type [ALT] and [B] to select the directory in question.

Then type [ALT] and [Q] to enter host mode. Both the PC and the PCW screens display a welcome message and ask for your name.

Enter your name on the PCW and press [RETURN].

Anything you enter here should echo on the screens of both machines. If it doesn't, check your cable and all the set-up options on both the PC and the PCW.

Type in the pass word that you chose earlier and press [RETURN].

The PCW screen now displays the options:

```
F(iles) C(hat) D(ownload) U(pload) S(hell)
G(oodbye)
```

The one we want is U for Upload. MEX then displays a further set of options:

```
K(ermit) M(odem7) T(elelink) X(modem) Y(modem batch)
```

Choose X.

MEX now asks for the file spec. This is the name under which the resulting file will be stored on the PC, and does not have to have the same name as on the PCW. For example:

File spec: PCTEST.ASC

MEX (in fact it is PROCOMM, as you are still talking to the PC, albeit from the PCW keyboard) then instructs you to begin the file transfer procedure. To do this exit from terminal mode by pressing [EXIT] followed by [E], which returns you to the MEX>> prompt. To start the transfer you type

```
mex>>    ST B:PCWTEST.ASC
```

MEX (for now it really is MEX) now opens the file, calculates the number of records and the send time at the baud rate selected, and starts talking to the PC all by itself. You type nothing else until it terminates, at which stage you will be back at the F(iles) C(hat) menu as above.

Then either repeat with the next file, or on the PC, type ESC to exit from the file host mode followed by [ALT] and [X] to get to MS-DOS.

Provided you have correctly wired up the cable, and set up both MEX and PROCOMM exactly as set out above, this process is guaranteed to transmit any length file – even ones bigger than 64k. Indeed I regularly copy files which fill an 8512 B: disc which is 700k plus. The only likely errors are if your PC disc fills up, or if you take too long to specify the PCW filename as PROCOMM will time out the transaction if it receives no data from the PCW in about sixty seconds.

ASCII and you will receive

Your PCW files, even the word-processing files, are data. The program(s) which you have bought for the PC will in most cases not be able to understand them unless you have first converted them to ASCII, this being the lowest common denominator between most modern computers. Do not expect your PC database program to act on a straight LocoFile database, for example. In general the rules are as follows:

1. Locoscript files. Make an ASCII file (f1 on Locoscript 2), and choose the "Simple text file" option. Abhorrent as it may seem, you are going to lose all your magnificent formatting commands within the document, but there is no easy way round this.

2. Wordstar files. Under CP/M convert them to 7-bit ASCII using PIP. For example, a file called LETTER.WS is processed thus:

```
A> PIP LETTER.ASC=LETTER.WS [Z]
```

To your relief, any formatting achieved through the "dot commands" is preserved.

3. Mallard Basic Jetsam files. If you are going to be running Mallard Basic on the PC (not supplied as standard), you don't have to convert the data/index files at all. If you are going to be running any other BASIC you have to print each file of every record to an ASCII disc file.

4.Basic programs. Simply LOAD each program, and SAVE it with the ASCII option:

```
SAVE "PROG",A
```

5.Databases and Spreadsheets. You will have to "export" the desired data from each into an ASCII file, and when it arrives at the PC, "import" it again. Use the "comma-separated" syntax if possible.

6.CP/M programs. No CP/M programs (.COM files) will run on a PC, and there is no point in converting them. You have no option but to buy new software packages. ■

Slow, slow, quick quick, slow

It is possible to uprate the baud rate of the link to 9600, which makes transfers of very long data files eight times faster. However the PCW's implementation of the screen handler contains serious restrictions on how fast it can update when scrolling, and the question and answer sequence becomes somewhat garbled. However provided you know what to type next and don't mind working blind (or you read from the PC screen instead of the PCW) the file transfer itself is unaffected. Cables longer than a few metres may limit the maximum speed to 4800 or even 2400 baud.

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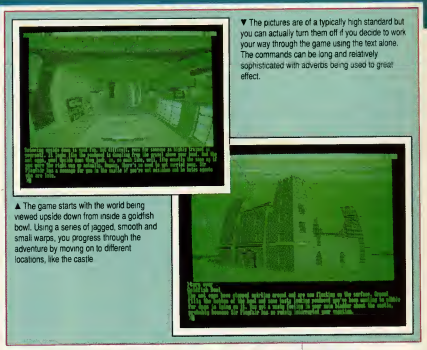
SCALING THE DEPTHS

Tony Flanagan falls hook, line and sinker for the new game from Magnetic Scrolls.



▼ The pictures are of a typically high standard but you can actually turn them off if you decide to work your way through the game using the text alone. The commands can be long and relatively sophisticated with adverbs being used to great effect.

▲ The game starts with the world being viewed upside down from inside a goldfish bowl. Using a series of jagged, smooth and small warps, you progress through the adventure by moving on to different locations, like the castle

FISH

£24.99 ● Rainbird/MagneticScrolls (01 240 8838) ● All PCWs

Any game that casts you in the leading role of goldfish is certainly worth a second look. Indeed, what more flattering a role could one wish for? As is well known, compared to the average human specimen, goldfish are much more intelligent, much prettier to look at and far better swimmers.

Sole destroying

The strange scenario of this aquatic adventure is this. The underwater world of Hydropolis is under threat from a gang of interdimensional anarchists known collectively as the Seven Deadly Fins. This non-organisation includes such fearsome felons as the Crayfish Twins, Captain Horatio Pineapple and Chuckette Cementhead, a nine month old baby known to his friends as Thug. Led by Brian O' Brian, the brains of the outfit, the SDF strike terror in the hearts of anyone who happens to be terrified of them. It seems that they have stolen a focus wheel (a wheel that focuses in case you didn't know) and dismantled it. Your task, predictably, is to fish it out as it were.

Fortunately, in your role as goldfish/trainee interdimensional espionage operative, fear is a word that you still can't spell even if you knew what it meant. Just as well, as this game is for the intrepid only – those who can withstand the searing pain that accompanies 'warping'.

Warping is really what this game is all about. For the uninitiated or for those who are just plain brainless, warping is a 'method of transferring the mind of a person from this dimension into the body of a living thing in this or any other dimension'. In other words, the game makes it possible for you to transfer your mind (please seek medical advice on this one) into the body of someone else.

Fortunately, the game's puzzles are pitched at a comfortable level – neither too difficult to the extent that they make you reach for the Cliff Richard records, nor too simple that you wonder why you bothered.

Pictorial eloquence

As for the game's pictures, these are up to Magnetic Scrolls' usual high standards and can be viewed in dither and stipple modes or turned off if you want to concentrate on the text alone. The text itself is well written in a suitably jocular tone and can be read in brief or verbose modes.

The game comes with a useful instruction sheet on how to look after your goldfish and how to make them live longer than three minutes, a fish identification chart for those who can't tell their Limanda Limanda from their Barbus Barbus and a one week travel card for the Hydropolis Underground Omnibus Company.

Anyone who has had the good fortune to play The Pawn or The Guild of Thieves will know that Magnetic Scrolls produce adventures of great originality. Unless you have other, more dangerous fish to fry, this adventure should keep you hooked... and if that isn't mixing metaphors I don't know what is. ■

PLUSES

- ▲ Full marks for originality
- ▲ Some excellent graphics which look particularly good on the 9512
- ▲ Good variety of puzzles increase the game's addictiveness

MINUSES

- ▼ You can find yourself back in your fishbowl far too frequently
- ▼ Characters need filling out

ATMOSPHERE	**5/5**	**INTERACTION**	**4/5**
CHALLENGE	**4/5**	**VALUE VERDICT**	**5/5**

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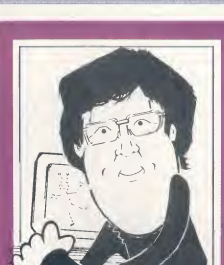
WRITING MORE GOODER



LANGFORD

A page in the company of author and PCW pundit David Langford

Y I have been. Trying to. Improve my style and. Make it. Easier. For you punters to read. Is this any. Better?

Well, several recent articles and press releases have gone on about the virtues of style checking programs – software that reports on the clarity of your writing. My first paragraph is the result of paying rather too much attention to one of the most popular "readability" tests. In future I will be writing lots more. Easy prose. Like this.

Conversely, would you care to measure your powers of analysis against a real brain-burster of difficult writing? A sentence whose comprehension, according to the best authorities, requires more than 31 years of full-time education? Fasten your straitjackets, check your MENSA credentials – here it comes!

"That excellent holiday of family celebration was enlivened by elephants, aspirin, carpentry and bananas."

If that challenge was too hard for you, work up to it by easy stages via the following sentence of the same length – which the same formula calculates as being easier by some 25 years of schooling.

"A sard pyx of lymph and gleet was limned with a quincunx of merkins."

By contrast, what does the formula make of my first, disjointed paragraph? The answer which is cranked out is that it's suitable reading for a hitherto uneducated child after approximately one year in school.

Gunnings for it

The formula I'm using, or misusing, is Robert Gunning's venerable "FOG index", the basis of most style checkers. It dates from 1952; the name is an acronym, meaning Frequency Of Gobbledegook.

Working the actual FOG formula involves going through a piece of prose and making some simple counts which cry out to be computerized. You count the number and length of the sentences, and from that work out an average sentence length.

You also calculate the percentage of "hard words" in the total word count, the rule of thumb being that a hard word is anything with three or more syllables which isn't a proper name (your program should be watching for capital letters), a combination of "easy" words (this eliminates terms like "horsepower" and "superfluid"), or a variant of a word whose basic form is "easy". "Edit" counts as easy, therefore "editing" is easy. As a writer – no, an originator – I always suspected it.

Finally, add the average sentence length to the hard-word percentage and multiply this sum by 0.4. The result, Gunning being an American, is supposed to give the US school grade at which you should be able to tackle the prose. Grade 1 corresponds to six-year-olds, Grade 2 to seven-year-olds, etc. I'm uneasy about adding two different kinds of number (an amount and a percentage) at the last step, but it seems that the formula tests out pretty well on a practical basis.

How ludicrously it can fall down is shown by those slightly spurious examples. My opening paragraph has no "hard" words at all and fiddles the sentence-length average by simple defiance of grammar. The "excellent holiday" sentence rates as terrifically obscure since 64% of its words are trisyllables and thus "hard", even if they don't look hard to you. And the "sard pyx" fools the rule-of-thumb difficulty gauge with a cluster of short, "easy" obscurities.

Obviously the second and third cock-ups can be partly eliminated by a program with access to some comprehensive dictionary of genuinely easy words. The first is actually more subtle. Breaking up sentences automatically gives a better readability score even when the. Disruption of logical. Flow means. A harder. Read....

Alarmist talk

This isn't merely an exercise in poking fun. Style checker programs are loose in the world. I don't know whether any author who submits text on disk has achieved the dubious privilege of being the first to be rejected unread because "the style program says you're too highbrow for our median market". It will come.

Fortunately the checking contains the seeds of its own ruin. I once wrote a spoof fairy tale in which a king, well read in the literature and having to choose between the merits of three princely suitors for his daughter's hand, decides to cut out the complexities and go straight to the inevitable winner by simply asking which prince is youngest. Later it occurs to him that this point is too well known, and all but the youngest prince will infallibly lie about their age.

Just so, authors may lie about their style, as in my examples above. Gunning's FOG formula assumes that writers are unspoilt and don't contort their prose to achieve a "correct" score. Authors with style checkers of their own may soon be cunningly aiming for the exact readability level demanded for the chosen market.

But by this stage, what will "readability" mean? Only that the prose is tailored to get the right score from tests like the FOG index. Some editor is still going to have to toil through the stuff and find out whether, like my second example but unlike my first and third, it really is readable. Back to square one, everyone.

Meanwhile, an outfit called Scandinavian PC Systems is flogging a style checker called READABILITY, presumably not for the PCW market since here you can't get away with a price tag of £59.80. Is it any good? A rave review appeared in PC magazine, excitingly illustrated with screen prints of the program at work. As it improves your English, READABILITY can be seen to offer you choises (sic), to give an overall evaulation (sic), and to report how many short or long words you use in average.

Truly, this could be the software that teached we to write good! ■

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LISTINGS

Racing and Sliding among the listings: a game try

RACER

by A Conforth and M Anson

Anyone who owned a computer in the early days of the home computer boom (something like five years ago!) will remember the various race games based on a scrolling screen and a static character that can be moved from side to side.

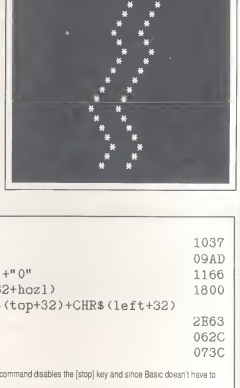
This game has been on every machine ever made that boasted a scrolling screen. Like Pacman it remains a classic, impossible to see without wanting to have a go.

This version boasts five levels of difficulty and can keep track of high scores (all right, just one more go, but even if you don't make five hundred it's still bedtime).

Once loaded the game requires a single keypress to start whereupon the road begins to roll down the screen and your car appears (well, the letter C which at least stands for car). The keys Z and X are used to move the car to the right and left to stop it crashing into the barriers down the side of the road. Once you finish (or more likely crash) the score is displayed and if it's the highest for the session you are invited to enter your name.

There are several improvements that could be made to the game, for example a high score table for each skill level can be added and perhaps saved to disc so that it is available each time the game is played.

Another possibility would be to redefine the characters used by the game to improve the appearance. A leisurely perusal of the Pacman upgrade by Joseph Walton could help with that. Making the game more difficult could be accomplished by narrowing the road at random intervals.




```
10 REM * by A.CORNFORTH *  & M.ANSON      *                          1037
20 REM **INITIALISE**                                                09AD
30 cls$=CHR$(27)+"E"+CHR$(27)+"H"+CHR$(27)+"f"+CHR$(27)+"0"          1166
40 DEF FNat$(col,hozl)=CHR$(27)+"Y"+CHR$(32+col)+CHR$(32+hozl)       1800
50 DEF FNwindow$(top,left,depth,wide)=CHR$(27)+"X"+CHR$(top+32)+CHR$(left+32)
+CHR$(depth+32)+CHR$(wide+32)                                        2E63
60 PRINT cls$                                                        062C
70 OPTION RUN                                                        073C
```

The lines up to 70 initialise the game, setting up the Functions used later and the inevitable (but necessary) cls$. The OPTION RUN command disables the [stop] key and since Basic doesn't have to check for it this allows the program to run a little faster

1

```
80 REM **GET OPTIONS**                                               0A8E
90 PRINT FNat$(1,2)+"press Z  to move car left";FNat$(3,8)+"X  to move car right"
                                                                     2405
100 RANDOMIZE (PEEK(64504!))                                         0B1E
110 PRINT FNat$(14,2)+"Which level do you wish to try ? ( 1 - 5 )"   1B52
120 key$=INPUT$(1)                                                   0952
130 IF key$="1" THEN space=8:finish=255:GOTO 180                     14F8
140 IF key$="2" THEN space=7:finish=300:GOTO 180                     14DB
150 IF key$="3" THEN space=6:finish=350:GOTO 180                     1503
160 IF key$="4" THEN space=5:finish=400:GOTO 180                     14EB
170 IF key$="5" THEN space=4:finish=450:GOTO 180 ELSE GOTO 120       1B42
180 PRINT cls$+"press any key to start"                              13C5
190 key$=INPUT$(1):PRINT cls$+FNwindow$(4,0,26,90)                   187B
```

The lines from 80 to 200 allow you to choose the level of difficulty to play at. Note that lines 130 to 170 could have been replaced with an ON number GOTO line which would have looked tidier.

2

```
200 REM ***MAIN GAME LOOP***                                          0CC1
210 DIM hit(finish+26)                                                09F8
220 REM **START GAME**                                                0A63
230 FOR start=0 TO 27:PRINT FNat$(start,42)+"*";SPC(space)+"*"        1C50
240 hit(start)=42:NEXT                                                0C2C
250 PRINT FNat$(0,45)+"C"                                             096D
260 REM **MOVEMENT, SCORE, DIE ETC. LOOP**                            154D
270 score=0:die=1:left=-1:right=0:cpos=45:sp=42:FOR play=29 TO (finish+26)   23B7
280 REM **PRINT UP BARRIER**                                          0E15
290 IF left=-1 THEN PRINT FNat$(27,sp+left)+"*";SPC(space);"*":sp=sp+
left:hit(play)=sp:GOTO 32                                             2CE8
300 IF right=1 THEN PRINT FNat$(27,sp+right)+"*";SPC(space);"*":sp=sp+
right:hit(play)=sp:GOTO 32                                            2FA7
```

3 Various things are going on here and it looks a bit confusing. In general putting the variables in one place makes things easier to understand. For fastest operation they should all have gone at the end since Basic has to look through lines from the beginning each time it finds a GOTO or GOSUB. For the same reason often used GOSUBs should be at the beginning for greater speed.

```
310 REM **LOOK FOR MOVEMENT**                                         0E75
320 key$=INKEY$:IF key$="" THEN 360                                   113D
330 IF key$="z" OR key$="Z" THEN temp=cpos:cpos=cpos-1:GOTO 350       1E72
340 IF key$="x" OR key$="X" THEN temp=cpos:cpos=cpos+1:GOTO 350 ELSE GOTO 370   2456
350 REM **MOVE CAR, CHECK FOR HIT**                                   10DE
360 PRINT FNat$(0,cpos)+"C"                                           0C9E
370 IF cpos=hit(play-25) OR cpos=hit(play-25)+(space+1) THEN 450 ELSE
score=score+1                                                         2957
380 IF sp<1 THEN sp=sp+1 ELSE IF sp>80 THEN sp=sp-1                   1844
390 decide=RND(1):IF decide<0.5 THEN left=-1:right=0 ELSE left=0:right=1   22E5
400 IF play=finish THEN PRINT FNat$(27,sp)+"##FINISH##"               1875
410 NEXT                                                              041B
420 PRINT FNat$(0,hit(play-27))+"##FINISH##";CHR$(7)                  14B6
430 REM ***END GAME OPTIONS***                                        0DFA
```

4 Checking for a hit is very time consuming when the only way to do it is to keep track of the screen position and value of the various characters. We're hoping to publish a machine code listing to do this very soon.

```
440 die=0                                                             038E
450 FOR delay=1 TO 2000:NEXT:PRINT cls$+CHR$(27)+"y"                  1698
460 score=score+2                                                     08FB
470 IF die=0 THEN PRINT FNat$(1,2)+"Well done you have finished the course"   2558
480 IF die=1 THEN PRINT FNat$(1,2)+"Bad luck you have crashed out !!"  1FE0
490 PRINT FNat$(5,2)+"Your score was :";score;"points"                1A7B
500 IF score>hiscore THEN GOTO 510 ELSE GOTO 540                      17B4
510 hiscore=score                                                     0925
520 PRINT FNat$(7,0)+"Well done that is a new high score !":PRINT FNat$(7,0)+""227F
530 INPUT"What is your name ?";name$                                  1208
540 PRINT FNat$(20,2)+"The highest score so far is :";hiscore;" by : ";name$   2191
550 PRINT FNat$(28,2)+"Do you want another go ? (Yes or No)"          1C49
560 a$=INPUT$(1)                                                      0594
570 IF a$="y" THEN ERASE hit:GOTO 60                                  10AD
580 IF a$="n" THEN PRINT cls$+CHR$(27)+"e"+CHR$(27)+"1":END           17EE
590 GOTO 560                                                          04D9
```

5 Notice that this is a well behaved game. It switches the status line back on when you quit. Always try to leave things tidy.

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SLIDER

by Graeme Jarvis

Another classic game and one which was no doubt played by the Romans (if not the Egyptians). The aim of the game is to get twenty four letters of the alphabet into the right order. Of course they start off in the right order and you have to press M to scramble them; this is very interesting to watch.

To do this a flashing dollar sign is provided which is used to indicate the leter you want moved. So long as the letter is next to a space it jumps into it as soon as the space bar is pressed. If the dollar sign is at the end of a row then the whole row is moved one space along.

In its present form the game is perfectly playable but not very visually exciting and a number of suggestions for improvements come to mind. One of the easiest to implement would be to draw a bigger grid in the centre of the screen using the graphic characters and put the letters into it. This would give the appearance of real tiles. The whole thing could be printed in inverse for an even more dramatic appearance.

Another improvement would be for the program to acknowledge that you'd succeeded, at the moment it doesn't. These are minor quibbles though, better a listing short enough to publish that can be easily added to than a long one we can't fit in.

How to type in listings

First you need Mallard Basic running on the PCW. Type basic at the A> making sure you have a copy of your CP/M disc in the A drive. If in B type in a>b:basic. Any program can be loaded from any drive simply by preceding the program name with the drive letter and a colon.

Basic will load and print OK to show it is ready. Now you can type in the listing as it appears on the page but DO NOT type in the four figure number at the end, this is a checksum produced by the program CHECK2.

When the line is complete press [RETURN] and Basic will digest it. If you make a mistake and notice it before pressing [RETURN] use [DEL] to get rid of it and type in the correct version. If you spot it after pressing [RETURN] type edit and the line number. You can then move along the line with the cursor keys, [DEL] the offending characters and retype. Finally press [RETURN] and the line will be accepted in the corrected form.

To see lines already put in type list and to print them out !list. When the listing is complete type save "a:filename or whatever you want to call it, there is no need to type bas after it. The filename can be any name up to 8 letters long. The listing is now safe on disc.

If the program doesn't run first time check your listing against the magazine listing. Usually there will be an error message giving a line number which will narrow down the search for the mistake.

To run a program previously saved type load "a:filename and then run. As a last resort – if all else fails – read the manual.

```
10 REM Slide game by Graeme Jarvis                                    1204
20 DIM a$(4,4):escape$=CHR$(27):bell$=CHR$(7)                         11EB
30 PRINT escape$;"f";escape$;"E";escape$;"H"                          14AF
40 DEF FN at$(x,y)=escape$+"Y"+CHR$(y+32)+CHR$(x+32)                  14F7
50 FOR y=0 TO 4:FOR x=0 TO 4                                          0CCB
60 a$(x,y)=CHR$(65+(y*5)+x):PRINT FN at$(x,y);a$(x,y)                 1733
70 NEXT x:NEXT y:a$(4,4)=" ":PRINT FN at$(4,4);" "                    15B3
80 sx=4:sy=4:x=4:y=4:seed=0                                           0D48
90 PRINT FN at$(x,y);"$";FN at$(x,y);a$(x,y):seed=(seed+1) MOD 1000   1A93
100 a$=INKEY$:IF a$="" THEN 90                                        09BA
110 IF a$="q" THEN PRINT escape$;"e":STOP                             135C
120 IF a$="m" THEN GOSUB 240:GOTO 90                                  100B
130 x=x+(a$=CHR$(1) AND (x>0))-(a$=CHR$(6) AND (x<4))                 13E5
140 y=y+(a$=CHR$(31) AND (y>0))-(a$=CHR$(30) AND (y<4))               1359
```

Using the user defined funtion Fn at$ to position the cursor greatly reduces the amount of typing (and thinking) necessary to get characters where they're needed on the page. This function is set up on line 40

1

```
150 IF a$<>" " THEN 90 ELSE GOSUB 160:GOTO 90                        1340
160 IF (x<>sx AND y<>sy) THEN PRINT bell$:RETURN                      18E3
170 FOR a=sx TO x+1 STEP -1:a$(a,y)=a$(a-1,y)                         12D0
180 PRINT FN at$(a,y);a$(a,y):NEXT a                                  0FBB
190 FOR a=sx TO x-1:a$(a,y)=a$(a+1,y):PRINT FN at$(a,y);a$(a,y):NEXT a 1F2B
200 FOR a=sy TO y-1:a$(x,a)=a$(x,a+1):PRINT FN at$(x,a);a$(x,a):NEXT a 1F48
210 FOR a=sy TO y+1 STEP -1:a$(x,a)=a$(x,a-1)                         1360
220 PRINT FN at$(x,a);a$(x,a):NEXT a                                  0F76
230 sy=y:sx=x:a$(x,y)=" ":PRINT FN at$(x,y);" ":RETURN                1A3A
240 RANDOMIZE seed:FOR z=1 TO INT(RND*30)+20                          15A9
250 x=sx:y=INT(RND*5):GOSUB 170                                       0F5F
260 y=sy:x=INT(RND*5):GOSUB 170                                       0F65
270 NEXT z:RETURN                                                     09A5
```

2

PACMAN UPGRADES

by Joseph Walton

Amstrad readers range from eight to eighty; coming somewhere between those two extremes is young Joseph aged 10; our readers are cleverer than most and have no trouble getting to grips with programming after school.

Joseph Walton has sent in a short program to change the characters used by the Pacman game into something nearer the original designs.

The actual program is a variation on one we've published before but since it's the sort of thing which always comes in useful (and to encourage young programmmers) we're including it again. What Joseph has done is to redefine the characters between 184 and 188 as a space invader the four different pacman shapes needed for the different directions.

To use them the original Pacman game has to be altered to include the lines necessary to detect the changes in direction and change the shape used, these are shown below:

```
10 MEMORY &HBFFE                                                    0829
20 FOR hex=&HC070 TO &HC098: READ pk: POKE hex,pk: NEXT hex         1C51
30 DATA 243,62,129,211,241,62,130,211,242                           0C1F
40 DATA 175,95,103,22,184,58,153,192,111,41,41                      0D9B
50 DATA 41,25,17,154,192,235,1,8,0,237,176                          0C82
60 DATA 62,133,211,241,62,134,211,242,251,201                       0D24
70 FOR char=184 TO 188: POKE &HC099,char                            116D
80 FOR row=1 TO 8:READ binary(row)                                  114B
90 POKE &HC099+row, (binary(row)):NEXT row                          1489
100 cl=&HC070: CALL cl: NEXT char                                   0E4A
110 DATA 34,99,119,119,95,127,62,28                                 0B44
120 DATA 60,126,127,95,119,119,99,34                                0BA3
130 DATA 0,62,119,252,240,252,127,62                                0B1D
140 DATA 0,124,238,63,15,63,254,124                                 0A8A
150 DATA 16,56,124,214,254,170,170,0                                0B2B
160 RUN "pac-man"                                                   07D7
```

1 This listing alters the characters and reads them into the character set. It then runs the Pacman game. For this to work both programs must be on the default drive.

```
180 PRINT move$;CHR$(32+y);CHR$(32+x);CHR$(186);                    141A
220 time=0:count=0:key$="":di$="":char$=CHR$(184)                   1573
260 PRINT move$;CHR$(32+y);CHR$(32+x);char$;                        13A6
290 IF di$="q" OR di$="Q" THEN y=y-1:char$=CHR$(184)                153C
292 IF y<3 THEN y=20:char$=CHR$(184)                                104C
300 IF di$="a" OR di$="A" THEN y=y+1:char$=CHR$(185)                1463
302 IF y>20 THEN y=3:char$=CHR$(185)                                0FC2
310 IF di$="k" OR di$="K" THEN x=x-1:char$=CHR$(187)                14E3
312 IF x<10 THEN x=75:char$=CHR$(187)                               10C9
320 IF di$="l" OR di$="L" THEN x=x+1:char$=CHR$(186)                14EA
322 IF x>75 THEN x=10:char$=CHR$(186)                               10BE
```

2 This listing contains the lines that have to be altered in the orignal Pacman game in order to use the altered characters.

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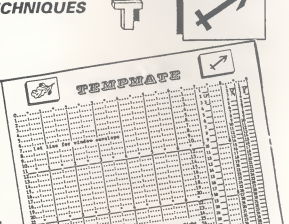

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TIP OFFS

Feeling a bit of a failure? Here are some tips for success

Are you a ninety-seven brain cell intellectual disaster area? Worry not, a few quick and simple mental exercises carried out for only half an hour a day in the privacy of your own home will soon have you heaving some really heavy knowledge way over other peoples heads. So get started on some easy tips today and who knows what you'll be able to tackle tomorrow. Useful ones win £10, the best can win £30! Send them to *TipOffs, 4 Queen St, Bath BA1 1EJ.*

Every one gets a taste of fame but some get paid as well. This month the money goes to A Cashead of Kinross for his tips on unprotecting Basic listings and J S Pumphrey for passing on his massive collection of Masterfile pointers.

Command Line

Although it is possible to run any program from the Protext command line using *FILENAME (where FILENAME is any COM file) only the Protext utilities like CONVERT and CONFIG return automatically to Protext when they finish.

However, using SUBMIT, any COM file can be made to return to Protext. The way to do it is by creating a little submit file with the lines:

```
PROTEXT
SUBMIT REENTER
```

Save this as REENTER.SUB and start Protext by calling the sub file. Now, every time a program is called from the Protext command and quits, the second part of the sub file will be carried out (it doesn't mind how long it has to wait) and the REENTER submit file will be called again thus invoking Protext. If all this is happening from drive M then the whole process is fast and silent.

Of course, if you now wish to go into CP/M you have to press [STOP] immediately after typing the Quit command to prevent the SUB file from executing.

Paul Hendricks
London

Blackout

Despite being a good game (all right, compulsive) Tetris does have a few minor irritations, and some major ones. One of these is that it leaves the screen reversed out when quitting the game or when using Flipper to get swiftly back into your spreadsheet as the boss comes around.

Previously, the best way (and the only way without resetting the machine) to put this right was to type PALETTE 0 1. A better solution is to play a single game, and when prompted for your name, press [EXIT] and c together, this will return the PCW to its normal

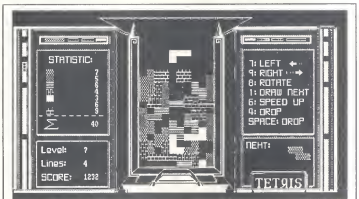
Bleep no more

Does the sound of LocoScript beeping at you drive you Loco? Then cast it out. As is so often the case, SID is the man to do it. This tip is for LocoScript version 2.16 (see the file name by using the [f8] menu to show hidden files. If the EMS file is called J216LOCO.EMS then you have the version of LocoScript this tip will work with).

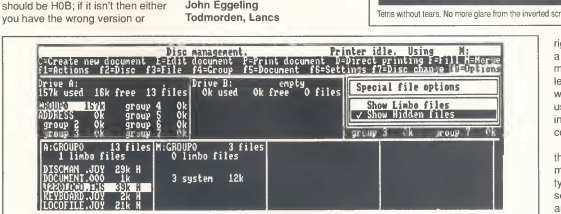
First run SID and then read the EMS file in with RJ216LOCO.EMS, examine the byte at H78E1 and it should be H0B; if it isn't then either you have the wrong version or you're looking at the wrong byte. Change this to H0C (just type the 0C characters and press [RETURN].

An interesting extra idea for deaf or partially deaf readers is to give a visual indication of miskeying. While SID has the EMS file in its grasp change the byte at H78E1 to 08 and then the byte at H78ED (which should be H0C) to H07. The screen will now be quickly switched off and back on again giving a flicker to indicate the error.

John Eggeling
Todmorden, Lancs



Tetris without tears. No more glare from the inverted screen, no more running PALETTE to put it right



To find out which version of LocoScript you have use the [f8] menu option *show hidden files*

screen mode while the game is actually running.

For more interesting though less useful results try [EXIT] and m, but remember, we told you not to do it.

Ben Plouviez
London

Brainstorming

If you want to move an entry from one part of a Brainstorm model to another you have to enter Y to confirm that you really do mean it. You might like to speed up your program by removing the need for the confirmation.

This can be done from Basic or using SID and both methods are included below; first the Basic listing in two versions, one using decimal numbers and one using Hex number.

```
10 OPEN "R",1,"brain.com",1
20 FIELD 1, 1 AS a$
30 a$=CHR$(195)
40 PUT 1, 10482
50 a$=CHR$(247)
60 PUT 1, 10483
70 a$=CHR$(41)
80 PUT 1, 10484
90 CLOSE
```

```
M>
M>sid a:brain.com
CP/M 3 SID - Version 3.0
NEXT MSZE  PC  END
3880 3880 0100 DAFF
#$29F1
29F1 CD C3
29F2 D5 F7
29F3 0A 29
29F4 3E .
#WA:BRAIN.COM
006Fh record(s) written.
#↑C
M>
```

Using hexadecimal this listing looks like this:

```
10 OPEN "R",1,"brain.com",1
20 FIELD 1, 1 AS a$
30 a$=CHR$(&HC3)
40 PUT 1, &H28F2
50 a$=CHR$(&HF7)
60 PUT 1, &H28F3
70 a$=CHR$(&H29)
80 PUT 1, &H28F4
90 CLOSE
```

If you prefer to do the same thing under SID then run SID and Read in the file BRAIN.COM. The bytes that need changing are below:

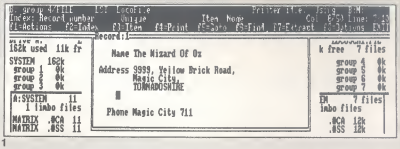
```
29F1   C3
29F2   F7
29F3   29
```

The reason these bytes are apparently at different locations from those in the Basic listing is because Basic counts from the beginning of the file whereas SID works from an offset at H100.

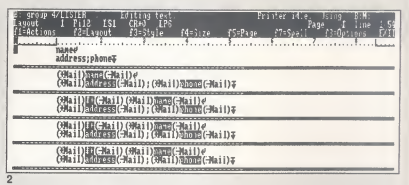
Once this is done working with Brainstorm will be a lot faster, but, don't use your original disc for the experiment, use a copy. If you don't feel confident of doing it yourself contact Brainstorm Software on

Fraught files

LocoFile is the ideal complement to LocoScript but as a database it does present some problems; for example a LocoFile database cannot be merged into a document in the way that a LocoMail file can. The structure is quite different. (1) However, there is an indirect way to create a LocoMail document from the data in the file. First create a document and call it something memorable like CHTULU.



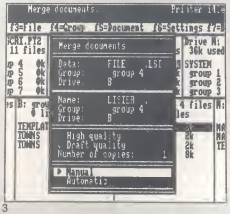
1



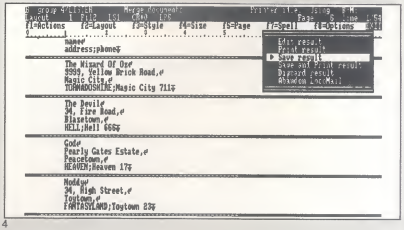
2

Now type in the field names (items) from your database on page 1 using suitable separators (a carriage return would do) and an [ALT][RETURN] as an end of page marker. On page 2 type in the field names with the separator you used in the master record on page 1 and put a (+Mail) and (-Mail) before and after each one. Now use the [ALT][RETURN] record separator again. Finally, copy this page into a block. (2) On page 3 type (+Mail)$+(-Mail) and then paste in the block you made from page 2. Copy the resulting page into a block. Now paste this block in as many times as you have records in your LocoFile database; the total number of pages should be one more than the number of records. You are now ready to form your LocoMail document. (3) First select mail merge by pressing M and then select the LocoFile datafile as the data document before finally pressing [ENTER]. Select the option you wish to use and finally select manual merge.

When everything stops you will be presented with a menu in the top right hand corner of the screen, one of the options will be Save result. Select this and assign a suitable name when asked. You should now be returned to the Disc Manager Screen but if LocoScript starts merging again just wait for it to stop, give the resulting file a different name from the first and save it. (4) The second file should be edited to remove the spurious master record from the beginning. It can then be merged onto the end of the first document, this will leave you with a standard LocoMail document that can be edited and saved. For large numbers of alterations to a database it is far easier to work with a LocoMail document than a LocoFile datafile.



3



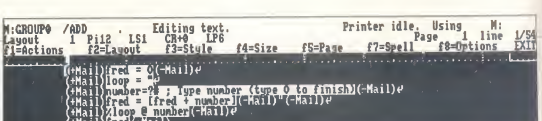
4

TIPOFFS

0895 677845 who will modify your original for a fee.
David Tebbut
Brainstorm Software

Valuable addition

If you need to perform the odd addition while in LocoScript then LocoMail can make the process very simple, especially if your calculator is never where you left it.



You need to create a file like the one shown above. The tabs should be decimal ones to make the figures line up neatly. Save the program as ADD. Use FILL whereupon various things will happen finally leaving the instruction Type number (type 0 to finish). Keep typing in numbers until you want a result, this will be displayed when you press zero.

Each of these documents can be edited, saved and merged if needed, and thus included in other documents.
Zena Diamandis
Letchworth
Herts

Label away

So Protext can't print labels? Hah! No problem at all. The actual method is common to most mail merging programs, only the commands change from one program to the next.

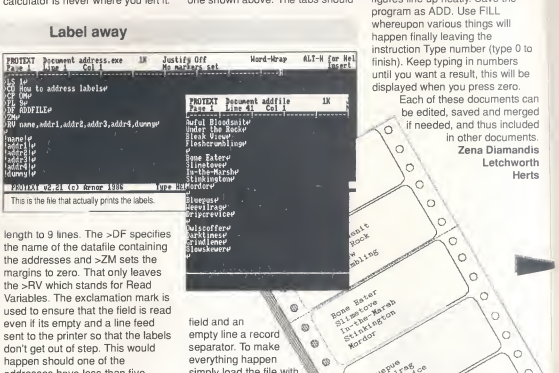
The trick is to persuade the program that it's printing very short letters on very small pages. Let's assume that you are using standard tractor feed labels of 1 1/2" by 3 1/2" one label wide; these give 9 lines from the bottom of one label to the bottom of the next. To print to these you need a Protext file of the following form:

```
>CO ADDRESS LABELS
>CP ON
>PL 9
>DF ADDFILE
>ZM
RV name, addr1, addr2,
   addr3, addr4, dummy

!name!
!addr1!
!addr2!
!addr3!
!addr4!
```

The >CO is just a comment (like a REM in Basic) and is ignored, the >CP sets continuous paper on and >PL 9 sets the page length to 9 lines. The >DF specifies the name of the datafile containing the addresses and >ZM sets the margins to zero. That only leaves the >RV which stands for Read Variables. The exclamation mark is used to ensure that the field is read even if its empty and a line feed sent to the printer so that the labels don't get out of step. This would happen should one of the addresses have less than five lines.

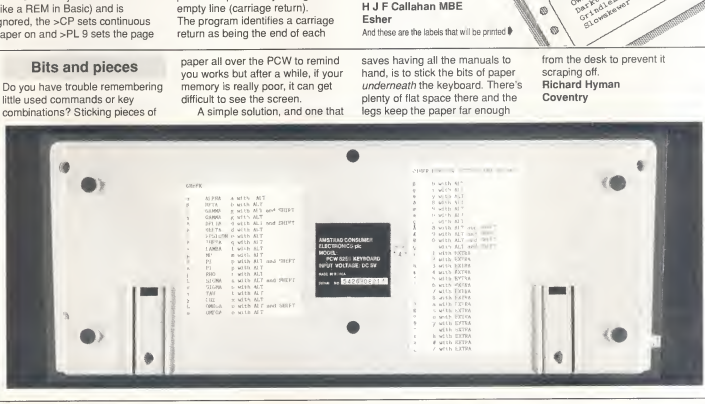
The datafile would have addresses arranged with one item per line separated by a single empty line (carriage return). The program identifies a carriage return as being the end of each field and an empty line a record separator. To make everything happen simply load the file with the commands in and from the command line use `print or printq` as you would normally.
H J F Callahan MBE
Esher



Bits and pieces

Do you have trouble remembering little used commands or key combinations? Sticking pieces of paper all over the PCW to remind you works but after a while, if your memory is really poor, it can get difficult to see the screen.

A simple solution, and one that saves having all the manuals to hand, is to stick the bits of paper *underneath* the keyboard. There's plenty of flat space there and the legs keep the paper far enough from the desk to prevent it scraping off.
Richard Hyman
Coventry



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More dBase II

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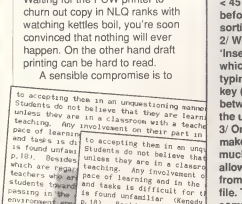
Serrick Neve
Worksop, Notts

Boldly go

Waiting for the PCW printer to churn out copy in NLQ ranks with watching kettles boil, you're soon convinced that nothing will ever happen. On the other hand draft printing can be hard to read.

A sensible compromise is to


to accepting them in an unquestioning manner. Students do not believe that they are learning unless they are in a classroom with a teacher teaching. Any involvement on their part in pace of learning and tasks is difficult for them and is found unfamiliar (Kenedy p.18). Besides, teaching is to accepting them in an unquestioning manner. Students do not believe that they are learning unless they are in a classroom with a teacher teaching. Any involvement on their part in pace of learning and in the tasks is difficult for them and is found unfamiliar (Kenedy p.18). Besides, teaching is which are regarded as the sole teachers who are seen as mechanisms students towards achieving the passing in the examination. The environment encourages and rewards accumulation of knowledge. Often is rather unconcerned about the responses to courses, and enables appropriacy of critical discussion (Evans & Swales, 1980, p.93). Furthermore, students' success is evaluated and assessed mainly on passing or failing in the examination day work receives much less attention. Students are weighed by their marks rather than on how well they handle assignments. Therefore, they

print a document out in bold. This gives good dark copy at nearly four times the speed of NLQ.

To get bold in LocoScript press [+]b and to clear it again use [-]b. To print out a whole document in this way put the bold command at the beginning with no clear command, this makes it simple to change later if you need an NLQ printout.

Sue Alexander
Reading

All systems go

If you want a particular program to run immediately on starting the PCW without having to use a profile sub file (to save the 9k PIP takes up perhaps) then rename the program as SUBMIT.

For example the Word module of Mini Office could be called SUBMIT.COM instead of WORD.COM leaving more space for text files on the disc.

Ben Goodwin
Liverpool

Mastering Masterfile – A tumult of tips

Masterfile is an extremely powerful database with a lot of features, but like all powerful programs it can be difficult to get to grips with. These hard won tips may help you find your way faster through the maze of Masterfile and are presented in the order in which they were discovered.

1/ If you shuffle the addresses then key an extra space before the lower numbers, for example using London Road < 45 that entry will come before London Road<145 after sorting.

2/ When editing text choose 'Insert' rather than 'Overlay', which can be achieved by typing the little tennis racquet key (the one with 2 on it between the cursor keys) and the up cursor.

3/ One of the facilities that can make creating a database much easier is the E option allowing data to be exported from the database as an Ascii file. This is done using the command sequence N,N,N.N,N,N in response to the questions Masterfile asks. The resulting file can then be re–imported into a new design of file format with a new sequence of data.

4/ The manual talks about Export – Import to resequence to another field but the sorting involved can take several hours. There is a quicker way to re–sequence and obtain a printout. For this it helps if the first keyed file is the one which has the longest records as this is sequenced automatically.

In the field you wish to resequence you divide the list into sections of 800 records or less by using the commands SORT, COMPARE <G & >M, ASSIGN to 1 & 3, INVERT, ASSIGN TO 2, and obtain Sections A – F assigned to 1, G – M assigned to 2, N – Z assigned to 3. The logic of this is that with up to seven assign numbers you can take the procedure over the 5000 record capacity available.

Selecting 1, 2, 3 in turn use D to display, K to resequence by the first six characters then P to print out, which will take very little longer than a normal printout with no sorting.

You can now print any field in sequence and retain all corrections on the one file. This saves an enormous amount of time.

5/ Buy a fast printer. Often data is most useful in the form of printouts and this will save a great deal of time when printing out large databases.

6/ Edit and update a file using a corrected printout to save trying to remember where you've got to on screen. If a record alteration, deletion or addition involves the keyed field resist all temptation to alter it, instead assign the record to another file, 1 (for example).

On completing the update session sort and select the records assigned to 1, save this partial file, delete 'Selected records' from the main file and save it.

Load and edit the partial file which will now be smaller and thus allow Masterfile to work faster. Now reload the main file and merge the partial file while you go and get a cup of coffee.

7/ By the time you reach three thousand records Masterfile is more reliable if the database (MFC – the current one, and MFP – the previous one) are the only files on the disc. Whenever you save a file do it first to the working disc and then to the backup disc.

8/ To obtain printouts in several formats containing different types of information and layout, say a single line per record for a telephone directory, then don't export – import. Apart from Format 0 there are nine formats available in the existing file. With practice you can design yourself a stylish format for each of your requirements using only the fields needed to display the information you want.

These displays can be obtained by going X Main screen, D Display, R Rotate to the Format you want, and P for Print. For editing the command R will take you across a database up to ten screens (or formats) wide.

9/ Easy export of any data section to LocoMail for mailmerge, or cross field calculation is available. Use I to insert a new record in the database file using single 'words' that will become the LocoMail master record. If ADDRESS is the keyed field then use –ADDRESS to ensure that the new record will become the first at the top of the list (the minus character comes before the letters in the Ascii character set).

Then change over to a LocoScript disc in B (if you have one) and use command E to 'Export Ascii file', followed by the Masterfile command sequence N,Y,C,N,N,Y, then the Ascii file name.

Now boot up with LocoScript and create a new LocoMail file. Using the [f1] menu choose Insert. There remain only two things to do. Edit the LocoMail file by first removing the minus sign from ADDRESS in the master record and secondly insert the [/][ENTER] command but only at the end of the first (master) record.

This file will now work with the LocoMail merge commands for mailshots or calculations.

John Pumphries
Enfield

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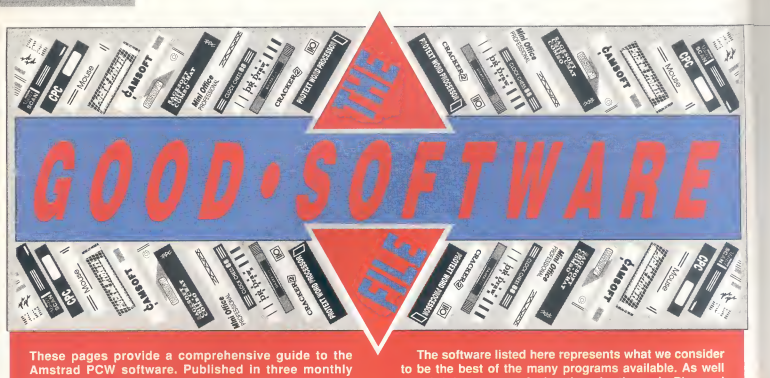

These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Databases, Education, Communications and Programming packages to face the ultimate test. We've set out to cover every important piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for your needs.

The software listed here represents what we consider to be the best of the many programs available. As well as a brief summary of what they do, the main Plus and Minus points for each program are listed – Pluses have a ▲ by them, and Minuses a ▼. Those we think are particularly noteworthy have a flash on them.

To the best of our knowledge, all the programs here should run on both 8000 series machines and the 9512.

•DATABASES•

There are broadly speaking two different types of database, and which suits you best depends, of course, on what you want it for.

Firstly there's the simple card index substitute. For many home users, this will be the kind of thing you want – all it does is store your address book or stock items so that you can easily look them up.

A more sophisticated option is the programmable database. With these, in addition to allowing simple card index retrieval there is a command language which allows you to analyse the data on the cards. For example, you could automatically add up the money owed to you by all your customers from Yorkshire. To make best use of this kind of facility, you will need to be able to understand a little programming, although it's not too hard really.

A bit of jargon now. A database is said to consist of records – this is just like a card in a conventional card file, with all someone's details on it. Each record is composed of fields – a field is a single entry on a card, like someone's name, or age, or postcode.

The thing that makes a database special is an index. You might be able to hold your address book as a simple list in a word processor document, but if it gets large then this becomes unwieldy. An index means that the database has worked out which order records should be in, so it can go straight to the one you want without looking at lots of others first.

The field that you use as your index (e.g. someone's surname) is said to be a key field, and can be looked up very fast compared to "non-key" fields. A good database will allow multiple keys, meaning that it can look up data just as fast for a variety of types of information.

MASTERFILE 8000

£49.95 • Campbell Systems • 0378 77762/3

A specially written PCW version of the successful database sold on other Amstrad computers. It is fully menu controlled, and makes good use of the PCWs special screen and keys. It can deal with up to 8 separate data files at once, so can cope with relational databases. Screen (but not printed output) can be elaborately laid out with boxes, lines etc.

PLUSES • MINUSES

▲ Works fast
▲ Wide range of Layout options
▲ Handles 'relational' files
▲ Plenty of good example files
▲ Can do arithmetic calculations within its records
▼ Capacity limited by size of M drive – best on an 8512
▼ Takes a while to learn all the features

ATLAST

£39.95 • Rational Solutions • 0566 81511

Recently released revised version with new manual and a new price, Atlast Plus is a full featured database that is excellent value for money. It does what Cardbox did, with much better reporting facilities, and can sort too. You can do simple totalling of columns, but not general arithmetic on fields in a record. Its claims to be a true 'relational' database like dBase II are a little grandiose, but a good general purpose database – recommended.

PLUSES • MINUSES

▲ Good screen editing facilities
▲ Constants enable insertion of repetitive data.
▲ Good on storage space – ideal for 8256 owners
▲ Handles names and addresses well.
▼ Still no arithmetic calculation in field
▼ Setting up the database is at first confusing – function of 'SYS' file unclear
▼ Good but not that good

CAMBASE II

£49.95 • Cambrian Software • 0766 831878

New version of the old favourite PCW database. Most important change is the Copy Filespec facility. You can set up a new database with potentially more entries than you've made provision for using the information from the original database. You can also change the fields to suit another set-up.

PLUSES • MINUSES

▲ Quick and efficient to use
▲ You can set up a database blueprint (Filespec) which you can test thoroughly before entering data
▲ Includes powerful features like conditionals, loops, field validation, and specified layouts
▲ Simple parts of the program are well-covered in the manual
▼ Can't use the memory - bad news for 8256 users
▼ You have to guess how to use the advanced features
▼ Not much room for prompts
▼ Tendency to crash occasionally in Filespec

MINI OFFICE PROFESSIONAL

£29.95 • Database Software • 0625 878888

Mini Office is a suite of five integrated programs – database, word processor, spreadsheet, graphics module and comms package. The database is a pretty standard card index type, similar to First Base. Good range of selection operations and arithmetic on fields. Can sort over a combination of fields and print out a variety of smart layouts, and you can have up to 255 fields! Of course you're getting four other very good programs as well. The big problem is that you can't import data, so any data you already have must all be re-entered. No export either.

PLUSES • MINUSES

▲ Easy to use and intuitive
▲ Can use the data in the word processor
▲ Powerful selection and sort facilities
▲ Arithmetic on fields
▲ "Test print" facility lets you check your labels will print OK
▲ One command makes global changes, ie all '£3.50' to '£5'
▼ Can't import or export data
▼ Manual is of very little use

CHIBASE 3.0

£49.95 • Chiasma • 01 399 975

The updated version of the 'free format' database. You type in the text, mark the words to be indexed and treat the file as a

DATABASES • EDUCATIONAL

database. The updated version allows you to import and export ASCII data files and a chain delete option enables you to work your way methodically through the database deleting the records you don't want while keeping those that you do
PLUSES • MINUSES
▲ Good amend, sort and recall features
▲ You can edit without a word processor
▲ Searches quickly through data
▲ Great for storing large amounts of data where the subject matter is variable
▲ Useful record template
▼ Expensive
▼ Can't run from m drive.

DELTA
£99.99 • Compsoft • 04868 25925

Delta is another of the heavyweights, like dBase II and Condor, but unlike them is fully menu driven. Although the screen layouts are fully flexible, there is a default "quick" layout so you don't have to sweat at defining your own. It could use better record indexing facilities. Particularly good for writing applications, once you have ploughed through the large manual
PLUSES • MINUSES
▲ Records can contain up to 90 fields, plus groups of fields that may be repeated
▲ Screen layout can be user defined, or "quick" mode used
▲ Single-page letter writer provides detailed mail-merge
▲ Processes can be defined, and run from user defined menus, for ease of use by others
▲ Very full, and quite readable, manual
▼ Only one field may be used for indexing
▼ Very big program – a PCW8256 would be hard pushed
▼ Some of the menu operations are unforgiving of errors

POCKET INFOSTAR
£69.50 • MicroPro/DRA • 0386 841181

Consists of two large programs, DataStar and ReportStar (both available independently). DataStar is a conventional database, with screen card layout and indexing. ReportStar then generates the printed output, either from DataStar or CalcStar files. Powerful if you can use them, but the suite is horrifically overcomplicated, and the documentation just incomprehensible.
PLUSES • MINUSES
▲ DataStar is a quite good database with indexing and calculated fields.
▲ "Transaction processing" feature allows cross-referencing of data files.
▲ Can be integrated with other Pocket products, eg WordStar.
▲ Can take up to 255 fields per record
▼ Two-volume manual set is very badly organised
▼ There are separate programs to run for form design, data entry and reporting.
▼ Operation is all by obscure command keys, à la WordStar.

CARDBOX-PLUS
£99.95 • Business Simulations • 0892 863105

Business Simulations are the company who actually wrote the successful Cardbox database, and they are the sole distributors of their enhanced version Cardbox-Plus. Disappointingly, still no field labelling facilities, but it does boast sorting, index listing, disc management and an autosave feature as extras to Cardbox. The ultimate straight card index, if you have the money.
PLUSES • MINUSES
▲ All the facilities of the very successful Cardbox
▲ Cards can be sorted into order for browsing and printing
▲ "Autosave" regularly stores the data to disc in case of mishap
▲ Files created by Cardbox can be read
▲ Full and good manual, although the tutorial is at the end
▼ Still no way of performing numeric calculations
▼ A lot to pay for a few frills to the basic Cardbox

DBASE II
£99.00 • Ashton Tate • 0628 33123

The WordStar of database packages. Recently licensed "cheaply" for Amstrad machines, dBase II is a market leader in business computing. As you would expect, this means it is very powerful but very complex. It has a procedure language to allow you to write programs to manipulate the data, and you can construct index files for really fast access to large databases. If you can make the effort to learn it, it'll serve you well.
PLUSES • MINUSES
▲ Powerful command language for customised programs
▲ Indexing facility makes large databases fast to handle
▲ Can handle very big databases
▲ The data can be fairly easily altered after its entry
▼ Manual is daunting (but there are plenty of independent books on the market)
▼ Can't easily alter the screen record layout
▼ An expensive package, you still only get 32 fields per record
▼ Generally unfriendly unless you have some programming skills

FT=DB
£29.95 • Encyclasoft • 0270 811868

A free form database like Chibase, but instead of typing your text into the database itself, you create it on a wordprocessor first of all. Once done and edited to your liking, you mark all the words you want to be used as keywords (still in your word processor) and then read it into FT=DB. Now you can treat it as a database, compile indexes, search for phrases and so on, all quite efficiently
PLUSES • MINUSES
▲ Easy to use
▲ Versatile retrieval system over several text files
▲ Inexpensive
▲ Can move between index and text at will
▼ No editing facilities within FT=DB

FIRST BASE
£29.95 • Minerva • 0392 37756

Billed as a simple database for the first time user, First Base is quite a competent cheap card index. The manual is computer printed, and weak on diagrams which doesn't help things. One weakness is getting printed results out of First Base – either you settle for crude lists, or you have to create a template in LocoScript which is awkward to do. But overall, for simple applications and beginners, it's pretty good value for money.
PLUSES • MINUSES
▲ Can alter the index field at any time
▲ Simple to use screen editing makes data entry easy
▲ Good value as a simple card index lookup system
▲ Easy to browse through picking out a set by hand
▼ Manual is badly laid out and generally difficult
▼ Producing printed output is awkward

SMARTCARD
£59.95 • Focus Computers • 0272 420109

A conventional card index database which is now the nearest thing available to Cardbox. Small and fast, you can sort the records index up to three fields and do simple arithmetic in fields. Can't put background text (eg. titles) on records or printouts
PLUSES • MINUSES
▲ Good clear screens
▲ Plenty of onscreen help
▲ Fast and high capacity
▲ Easy to use
▼ Can't put background text on printed reports
▼ No way of exporting data for mailmerge

DATASTORE II
£39.95 • Digita • 0395 45059

Another standard database, written in BASIC and using Mallard's famous JETSAM commands. Is therefore slow in some parts though version 2 is considerably faster than 1. Simple to use, has calculation facilities and a good control over the printed output – your printouts can be made to look very impressive. You have to set the maximum number of records you want before you start, which is tedious, and browsing is slow.
PLUSES • MINUSES
▲ Good range of print format commands
▲ Simple to use
▲ Calculation facilities – OK for accounts use
▲ Nice touches eg. text automatically adjusts size to fit printout
▼ Must set max. no of records on setting up database
▼ Only two print formats per database
▼ Slow at browsing through

SAGESOFT RETRIEVE
£70.00 • Sagesoft • 091-284 7077

A high-power package that is relatively easy to use with password security if desired, calculations, automatic counting or deletion of sets of records satisfying given conditions. It also has sophisticated sort and select commands, and change the structure of an existing database. All this is done by a set of commands rather like a programming language. Printed formats are rather limited though and the program insists on using both drives, making use on a 8256 impractical.
PLUSES • MINUSES
▲ Easy to use for a powerful package
▲ Advanced sorting and selection commands
▲ Subsets can be written to files
▲ Can count or delete subsets with one command
▲ Labelling/mailmerging routines included
▲ Can change structure of existing database
▼ Impossibly big program for 8256
▼ Printed output limited – must use mailmerge

PROTEXT FILER
£24.95 • Arnor (0733 68909) • All PCWs

This is a program which adds database features to Protext so that you can use a database system from within the wordprocessor. It's very convenient for maintaining records without having to keep switching to a database package Except for the sort program, you can work within Protext all the time.
PLUSES • MINUSES
▲ Very easy to use once you learn it
▲ Familiar Protext environment.
▲ Good sorting facilities and name handling.
▲ Can use Protext/database in parallel
▲ Import/export/print formats no problem.
▼ No calculation facilities
▼ Selection facilities are a bit crude.
▼ If you're familiar with Protext you can probably mimic a database yourself.

MICROFILE
(Sold in The Micro Collection)
£49.95 • Saxon Computing • 0401 50697

Microfile is a well implemented simple database, driven by plenty of menus and on-screen prompts. It's fast and has good screen control, although it has some size restrictions. Microfile comes as part of a software suite,"The Micro Collection", which is good value (Microfile, Microwrite, MicroSpread, Flexilabel and Lock-It)
PLUSES • MINUSES
▲ The price includes competent word processing, spreadsheet, labelling and encryption programs
▲ Plenty of menus and on-screen prompting
▲ Very flexible formatting for screen layout and printing
▲ Numeric fields can be expressions to be calculated
▲ Indexing is fast and can be on several fields
▼ Maximum number of fields per record is only 20
▼ Limited facilities for totalling up fields in a database

• EDUCATIONAL •

ANIMAL VEGETABLE MINERAL WORLD WISE
£14.95 each • Bourne Educational • 0794 523301

Aimed at the younger market, 7-15 year olds. Both these programs work by learning as the child uses them. Think of an object and the computer tries to guess it. If it is wrong, the child is asked for a question which would allow the PCW to be right next time, and it learns.
PLUSES • MINUSES
▲ Can be used as many times as the child's imagination holds out
▲ Performance can be analysed by a teacher after a session
▲ As you build up a base of objects and questions, they can be saved for reuse
▼ It needs a lot of typing, hence a lot of supervision
▼ The PCW starts with only two objects known, so it takes time to get going
▼ Documentation has hardly been altered from cassette-based versions
▼ Since it is for young children, more imaginative use of the screen would be nice

WRITE RIGHT
£9.99 • Wadd Soft • 0253 721303

Program consists of 24 sets of multiple choice questions designed to test and improve the student's knowledge of the English language: sentence construction, spelling, punctuation, vocabulary, for example
PLUSES • MINUSES
▲ Covers all the most important aspects of language learning
▲ Very addictive
▲ Good fun and easy to use

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Or else Stretch it to fit

▲ Just some of the fonts available on AMS' *Stop Press*'

Desktop publishing – doing page makeup on your computer instead of the old cut-and-paste method – is the boom area of home computing. All the national dailies are switching over to DTP methods – and so are thousands of PCW owners, to produce newsletters and flyers.

Want to try your hand? The best developed DTP package for the Amstrad PCW range is now available from Future Publishing at an all-in price of £74.99. Stop Press's incredibly versatile and powerful software plus mouse will turn your PCW into a DTP machine.

The Swiss-made mouse is probably the best currently available and offers high resolution movement all over the screen. The software makes the best possible use of this sensitivity, featuring as it does a wide range of DTP facilities which would probably cost three times as much on higher-priced computers.

Just a few of the features are: -

- **14** different fonts supplied
- Type sizes from **9 to 96 points**
- **Clip art** ready made to insert into files
- Text entered **directly** or **imported** from word processor
- On-screen text formatting, including **autoflow** around a picture
- **Draw, spray or paint** - your own designs or those supplied
- Up to **nine columns** per page!
- Bold, italics, underline, reversed boxes
- Centering, ragged right and literal justification
- Prints up to **108 pages** in one go
- **Shape drawing** includes triangles, squares, cubes, circles and ellipses
- Compatible with **digitised pictures** from MasterScan, Electric Studio and the Rombo digitiser
- **9512 compatible** using an Epson compatible dot matrix printer

Altogether, this is a superb way of getting to grips with DTP. We don't expect to offer any other DTP package through these pages again, because we've held back until we were absolutely sure that this was the best deal. So here's your chance to get going.

Save £15 on the manufacturer's recommended retail price by placing an order with our mail order department (telephone 0458 74011)!

Newsletters, fanzines, posters, letter heads, leaflets, charts, graphic business reports, flyers... all are now within reach, allowing your imagination as much freedom as possible. And with Stop Press there's no better way into the world of DTP.

Order Code 8023

THE GOOD SOFTWARE FILE

EDUCATIONAL • COMMUNICATIONS

2 FINGERS TOUCH TYPING
£24.95 • Iansyst • 01-607 0187

Despite its provocative name, a useful typing tutor in that it specifically caters for people who can already get by on keyboards with two fingers. You are gradually introduced to touch typing, so your speed doesn't drop while you learn. Fills a necessary slot in the Typing Tutor market.

PLUSES • MINUSES
- ▲ Suitable for improving two-finger typists without much drop in speed
- ▲ Full on-screen instructions
- ▲ Exercise material is interesting text, not letter drills
- ▼ Explanation text is annoyingly verbose in some lessons
- ▼ It doesn't always ensure that the cursor is properly aligned with the exercise text

ULTIMATE QUIZ
£14.95 • David Greenhough Computing • 0274 640764

An educational aid for school-age children. Two 'quizzes' on a multiple choice format are available on the one disc. The first one is a general knowledge quiz, the second is based on the Highway Code. You can play against a timer and can set the level of difficulty.

PLUSES • MINUSES
- ▲ Optional noughts and crosses game included with either quizz
- ▲ Incorporates an editing file for easy updating of questions
- ▲ It's very versatile, up to 8 people can play
- ▲ Provides hours of general knowledge fun
- ▼ None of the questions are repeated
- ▼ Some of the questions are a little esoteric

SUPERMATHS
£16.95 • Abacus Software • 0689 36293

Specifically designed for the PCW, this program exercises basic numeracy skills in children. Questions are asked in quick-fire volleys of ten and cover all four operations (addition, subtraction, multiplication and so on) Scores are automatically recorded

PLUSES • MINUSES
- ▲ Special original Test and Worksheet modes included - the latter is ideal for teachers
- ▲ Very efficient scoring method
- ▼ Numeracy level is very basic
- ▼ Some of the questions may start to look familiar after a while
- ▼ Graphics could be a lot more exciting

LANGUAGE TUTORS
£19.95 each • Kosmos Software • 05255 3942/5406

Four programs with indentical formats to help you learn French, Italian, Spanish and German. They can be used just as effectively by students of those languages learning English too. Very versatile series of programs and useful adjuncts to conventional language learning

PLUSES • MINUSES
- ▲ Can edit the lessons yourself to include new words
- ▲ Useful self-test option
- ▲ Completely bi-lingual packages
- ▼ Purely for learning vocabulary - no grammar lessons
- ▼ Would have been more useful if they had also included audio cassettes

GIANTKILLER
£14.95 • Topologika • 0733 244682

A mathematics adventure game loosely based on Jack and the Beanstalk. Lots of intriguing puzzles which should stimulate any student up to GCSE standard. Not the best adventure game ever written but great for making mathematics fun!

PLUSES • MINUSES
- ▲ Puzzles plausibly integrated into scenario
- ▲ Progression of game is simple and well defined
- ▲ Puzzles introduce a lot of valid mathematics
- ▼ Program understands only very simple commands
- ▼ Saving a position takes a move – can be fatal
- ▼ Won't be of particular help in exams

BETTER SPELLING
£12.95 • School Software Ltd • 010 353 61 27994

This is a spelling course aimed at the 8 to adult age group. It consists of a series of well organised, short lessons each dealing with one topic, like plurals or which version of there/their/they're to use in a sentence. The use of the PCW screen is rather unimaginative, and doesn't hold your attention.

PLUSES • MINUSES
- ▲ Well thought out lessons to emphasise particular points
- ▲ Teaches words in a sentence context as well as in isolation
- ▲ Lessons can be picked in any order from a menu
- ▲ Seems to be print against mischevous key pressing
- ▼ Boring use of the screen doesn't grab interest
- ▼ No instructions come as to how to use the program.

CHEMISTRY • BIOLOGY
£12.95 • School Software • 010 353 61 27994

These two are fairly traditional question-and-answer tests. You are faced with a choice of 10 topics, and then asked 10 or so questions each, where you have to fill in the blank in a statement. There are preamble notes beforehand, and if you get it wrong you are given a clue. Aimed at 12-16 year olds

PLUSES • MINUSES
- ▲ Questions would challenge a GCSE pupil well
- ▲ Preamble notes introduce topics
- ▼ The fill-in-the blank questioning style has little flexibility for different answers
- ▼ No option to add questions for a specialised syllabus
- ▼ Some careless errors, like incorrect facts and hard to decipher chemical formulae

MICRO MATHS
£24.95 • LCL • 0491 579345

Supposedly covering 8 to adult ages, this seems an O-level type program, covering topics from calculus to tubies. A good implementation on the PCW with proper use of the screen. Questions are picked at random from a pool, so may repeat but never run out. Replies to questions are typed in mathematical notation, like X^2+3

PLUSES • MINUSES
- ▲ You can pause to use BASIC as a calculator while you think
- ▲ Unlimited question set
- ▲ Comes with a 'free' book of AEB O-level questions
- ▲ Good hints and explanations when you get an answer wrong
- ▼ Questions in a topic repeat occasionally
- ▼ Some frills, like the clock and beeper, are annoying
- ▼ No flexibility to add questions for a particular syllabus

•COMMUNICATIONS•

Communications is one of the glittering areas of computing, gurus would have you believe. It can provide a fascinating hobby for 'hackers', but more importantly it is a valuable business tool.

'Electronic mail' is just what it says: you use your PCW to send messages, which can be documents thousands of words long, to others on the electronic mail system. The best known system of this kind is Telecom Gold, which also allows you to send telexes. Another major system is Prestel, which is more of an information provider – you can read share prices, weather information and other news direct from your phone line.

For any professional service, you pay a registration fee, plus a connection charge – typically around 10p per minute you use the system. Of course, your phone bills are extra. For hobbyists there are also 'Bulletin boards', which are effectively a kind of private electronic mail system run by a system operator (a 'sysop' to those in the know).

To use any service, you will need to buy a modem and an interface. A modem allows you to send computer signals down a phone line, and the interface gets the signals from your PCW to your modem. The pair will set you back £200 or more. Once done, you need some software to allow you to send and receive data, and it is this software reviewed below.

Electronic mail services just send strings of characters to and fro, whereas Prestel is a 'Viewdata' system, meaning it sends pictures and graphics too. Software needs to do more to receive Viewdata pictures, so if you want to use Prestel make sure your software is up to it.

8256UKM7.COM
Public domain (ie. free!)

P.D. software documentation is often poor but this program has an above average document file. UKM7 was written to support ASCII file transfers using error correction and as a dumb terminal either for use over the phone or between two Amstrads. Between two PCW's file transfer is possible at a staggering 31,250 baud which is even faster than PIP! Easy to use for beginners and better than KERMIT, UKM7 provides a cheap and excellent way to communications after you've got fed up with the PCW's MAILZ32. 8256UKM7 is available from the Public Domain Special Interest Group, or most bulletin boards supporting the PCW machines

PLUSES • MINUSES
- ▲ Cheap (the price of a phone call)
- ▲ Easy to use, and helpful menus
- ▲ Both CRC and Xmodem protocols supported
- ▲ Single file and Batch Mode transfers
- ▲ "Quiet" mode for slightly faster transfers (on-line transfer progress report disabled)
- ▼ Only ASCII, no Viewdata
- ▼ You need to find a PD software source (eg. use a modem and MAILZ32 software)

DIALUP
£89.99 • PMS Communications • 021-643 7688

Offers both E-mail and Viewdata operations. Very easy to use, and offers an XMODEM transfer protocol unlike Sage ChitChat If you are buying a modem too there are some cut-price bundled deals to be had, eg. the Miracle Technology WS4000 modem

PLUSES • MINUSES
- ▲ Simple to use
- ▲ Comprehensive file transfer commands, including XMODEM and the increasingly popular KERMIT
- ▲ Runs from the M drive
- ▼ Manual is not PCW specific, and the references to 5.25" discs are tedious

CHITCHAT
E-MAIL/VIEWDATA/COMBO

Sagesoft • £69.99/£69.99/£99.99 • 091 284 7077

Two communications programs for the 8000 series machines that have been around for a good time now. Most of the features you will need are here: message text editor, preprogramming unattended tasks(if you use a suitable "intelligent" modem), directory of stored numbers, copy to printer, and a very useful connect time clock so you can watch your phone bill climb! E-mail is used for simple text phone links like Telecom Gold, whereas you'll need Viewdata if you want to use Prestel. The Combo pack contains both E-mail and Viewdata.

PLUSES • MINUSES
- ▲ Good, clear documentation
- ▲ Easy for first timers to use
- ▲ Built in text editor for pre-sending message preparation
- ▲ Pre-definable tasks executable at any preset time if unattended.
- ▼ No error corrected file transfer (i.e. Xmodem or CRC)

THE GOOD SOFTWARE FILE

COMMUNICATIONS • PROGRAMMING

MINI OFFICE PROFESSIONAL
£29.95 • Database Software • 0625 878888

Mini Office is a suite of five integrated programs: database, word processor, spreadsheet, graphics module – and a comms package which is as comprehensive as anything else on the market. It can display both ordinary text screens and the 'Viewdata' block graphics used by Prestel. You are offered baud rates from 75 to 9600, separately set for transmit and receive, straight terminal emulation for use with Telecom Gold, and XMODEM and KERMIT file transfer protocols for error-proof transfer of long files. Would be well worth the money just by itself – and of course you're getting four other very good programs as well.

PLUSES • MINUSES

- ▲ Very comprehensive – a genuinely useful comms package
- ▲ Ordinary text and 'Viewdata' block graphics
- ▲ Can save setups under names and recall them, so you only need work out your baud rates/parities once
- ▲ You can set keys to return strings, such as Telecom Gold passwords
- ▲ Comes preconfigured to use Prestel and Telecom Gold
- ▼ Manual is of very little use
- ▼ Still some bugs

COMM+
£86.25 • NewStar • 0277 220573

This single package combines both ASCII and full Viewdata block graphics and Teleosoftware downloading. A very powerful command language allows you to look for particular messages coming in and take actions, even while doing other things. Its use is only limited by your programming ability.

PLUSES • MINUSES

- ▲ Very comprehensive and well indexed ringbound manual
- ▲ High quality Viewdata graphics
- ▲ Well presented on-line help menus for use by beginners
- ▲ Autodialler program works with most manual modems
- ▲ Teleosoftware downloading facility, with CRC/Xmodem checking
- ▲ Very powerful command language, doesn't need much programming skill to learn
- ▼ Not recommended for absolute beginners to communications

can lose track of which variables are used where. The VICAR produces a concordance listing and other diagnostics, to help you find bugs and maintain the program.

PLUSES • MINUSES

- ▲ Easy to use but still flexible through use of options
- ▲ Amstrad versions all at a special low price
- ▲ Good manual
- ▼ Only of value on large programs
- ▼ Limited value to most PCW users (except BASIC buffs)

MODULA 2
£45.00 • FTL/Grey Matter • 0364 53499

A compiler, Modula-2 is the successor to Pascal, good for large programs requiring separate compilation.

PLUSES • MINUSES

- ▲ Full implementation with extensions.
- ▲ Includes libraries of predefined modules
- ▲ WordStar-type screen editor included
- ▼ Compilation process is longwinded and not for beginners

CBASIC
£45.00 • Digital Research • 0635 35304

Compiler

PLUSES • MINUSES

- ▲ Easier programming tool than conventional BASIC interpreter
- ▲ Very similar to BASIC, so easy to learn
- ▼ No text editor – must split your programs into 200 line chunks to work on
- ▼ Programs work no faster than they would in conventional BASIC, sometimes slower
- ▼ Non-programmers may get bored.

MAXAM II
£49.95 (£69.95 inc. C) • Arnor Ltd (0733 239011) • All PCWs..

CP/M machine code development system incorporating an editor, assembler and monitor. It will allow you to disassemble extra memory on m: drive.

PLUSES MINUSES

- ▲ Very versatile assembly language programming environment
- ▲ Flexible monitor capable of bank switching, conditional breakpoints and symbolic debugging.
- ▲ Tailored to meet all CP/M Plus programming requirements
- ▼ Program can't cope with some undocumented Z80 instructions.
- ▼ Program assumes basic familiarity with the Z80 assembly language.

• PROGRAMMING •

Programming languages come as either 'compilers' or 'interpreters' – compilers pre-process the program into machine code, so are much faster. The PCW's standard Mallard BASIC and LOGO are both interpreters. Compilers are generally more cumbersome to use than interpreters, but have obvious benefits.

With language compilers in particular it is difficult whether they are reliable and efficient without spending many weeks working with them, impossible for a brief review. If you use a specialised programming language and have any comments that would help us compile a good software file entry for it, we would be pleased to hear from you.

ALL YOU EVER ...
£24.95 • CP Software • 0993 823463

Program is ridiculously entitled All You Ever Wanted To Know About Graphics, the Universe and Everything on the PCW 8256/8512 but were Afraid to Ask. It's for the experienced programmer who needs fast, smoothly-flowing and professional-looking graphics output. It has a library of machine code routines which you can use in any language from Mallard Basic to machine code.

PLUSES • MINUSES

- ▲ Graphics of same standard as those found in professional packages
- ▲ Demo programs included on the disc
- ▲ Routines are very wide-ranging
- ▲ Excellent value for money
- ▲ New routines of latest version concerned with printer control
- ▼ Not recommended for beginners
- ▼ Cumbersome to use from BASIC

PASCAL / MT+
£45.00 • Digital Research • 0635 53499

A full implementation of ISO standard DPS/7185 Pascal with a number of extremely powerful additions. Is very good for large complex applications - both data-processing and system control.

PLUSES • MINUSES

- ▲ A very powerful tool for the serious software writer
- ▲ Unlimited program size with modular development and use of overlays
- ▲ Built-in assembler
- ▲ Improved string handling (over standard Pascal)
- ▲ Choice of BCD real numbers for commercial/financial use
- ▼ No built in text editor - will need to operate separately
- ▼ Compiler in general and the manual in particular are not for beginners.
- ▼ No graphics

MIX C
£29.95 • Advantage • 0844 52075

American C compiler. You can buy a full screen editor with it for £19.95 extra. Also machine code assembler & examples for £8.95 each.

PLUSES • MINUSES

- ▲ Features a C tutorial
- ▲ Comprehensive implementation and massive manual
- ▼ Not for the newcomer to programming

DEVPAC 80 MKII
£49.95 • Hisoft • 0525 718181

Version 2 of the PCW hacker's first choice of development system. Substantially upgraded from the original with a new quite powerful debugger, and a Mini Office-style main menu from which to run the individual utilities or your own finished programs.

PLUSES • MINUSES

- ▲ Powerful assembler producing .REL files
- ▲ Good hex facility for BASIC programmers
- ▼ Text editor antiquated and clumsy
- ▼ Weak monitor

HISOFT C
£39.95 • HiSoft • 0525 718181

A very good C compiler, fast, produces good compact code,

PLUSES • MINUSES

- ▲ Compiles program into ordinary CPM .COM file
- ▲ Produces compact code
- ▲ Fast and inexpensive
- ▼ No floating point arithmetic

LFORTH
£19.95 • HiSoft • 0525 718181

Forth is an unusual language, somewhere between assembler and C. This is one of the few compilers available for the PCW

PLUSES • MINUSES

- ▲ Comes with a Forth editor
- ▲ Quick and efficient implementation
- ▼ Manual doesn't teach you Forth

PASCAL
£39.95 • HiSoft • 0525 718181

A standard full Pascal compiler

PLUSES • MINUSES

- ▲ Well integrated text editor – when you hit a compilation error you are returned to the correct point to edit it
- ▲ Short compilation time, economical on memory
- ▼ Manual makes no attempt to teach you Pascal.

THE VICAR
£29.95 • lansyst • 01-607 5844

A programming tool for serious programmers. If you have a several-hundred line program held in several files on a disc, you

NEXT MONTH

The guide continues with the categories of SPREADSHEETS, GRAPHICS and GAMES. The month after that will cover WORD PROCESSORS, ACCOUNTS/PAYROLL, UTILITY and DTP software, and the month after that it's back to this month's topics.

Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available at £1.75 each.

Meanwhile, if you are aware of any significant omissions or errors in the File as published, please let us know. We intend to maintain it as THE authoritative guide to PCW software.

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DISK TRANSFER SERVICE - PCW/CPC to and from other CP/M computers, IBM and some BBC Details (sae please) from MAPEJ, 32 Carew Road, Mitcham, Surrey, CR4 2JH. Tel 01-640 7676.

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IAL OFFERS

THE 8000 PLUS SPECIAL OFFERS SELECTION

Welcome

[illegible] to the 8000 Plus Special Offers section. This [illegible] we've got a [illegible] you with the best combination of price and quality [illegible] the new world.

On the next few pages we have [illegible] and Rainbird/Magnetic Scrolls, a group called "Fiers" [illegible] to bring PCW owners [illegible] of commercial pleasure from the machine.

On the more serious side [illegible] Mini Office II, the latest Mini Office [illegible] of them and a complete [illegible] for the [illegible] one. We have [illegible] you also like the desk and bookshelves we've featured on the following pages [illegible] to make [illegible] and [illegible] quality and service in mind.

If you have any queries on the products please call Customer Services Manager Sarah Richards on 0458 74011 - she'll be sure to be able to help.

9512 software:
The following titles do not run on the 9512:
Catch 23

TOMAHAWK

Only £14.95 (RRP £19.95)

This 9512-compatible helicopter simulator is just the best! Quite apart from the fact that it's the only one, Tomahawk has won heaps of praise as being a superb real-time simulator based on the Apache helicopter.

Full instrument panel includes artificial horizon, Doppler navigation, VDU, with a map. A full range of flying options includes backwards and sideways flight, aerobatics, take-off and landing procedures and torque turns. Four skill levels plus day/night, clear/cloudy and wind options are available. Four mission types are included. **Plus** three weapons (gun, rocket and missiles) and enemy guns, tanks and helicopters to take out.

A huge program in every way!

Order Code 8049

CATCH 23

Just £14.95 (RRP £19.95)

'A good deal of thought and planning has gone into this game and it shows', was what our reviewer said of this 3D wire graphic arcade strategy game in issue 25 of *8000 Plus*. Martech's first PCW game is something of a quiet triumph for intelligent gameplay interspersed with furious action requiring lightening-fast reactions at key points.

The basic aim is to enter a military complex and get out with a laser system blueprint. You have 14 sectors to explore, and weapons include detonators, bombs and timers. The vector graphics - *a la* Starglider - involve you in a thoughtful game which offers the best PCW entertainment for many a long winters night.

Order Code 8043

Fish Rainbird/Magnetic Scrolls

RRP £24.99 OUR PRICE £19.95

As reviewed in this issue of 8000 Plus Mar '89.

ONE NIBBLE AND YOU'RE HOOKED

An adventure game where you play the part of a goldfish !?

With full marks for originality and excellent graphics on a PCW With characters such as Chuckette Cemethead and Captain Horatio Pineapple, just two of the members from the "Seven Deadly Fins"- as your enemies your task is to recover the stolen "Focus Wheel" A well written game from the authors of such classics as "The Pawn" and "The Guild of Thieves" - an essential piece of light relief from Locoscript!

Order Code 8060

!! 0458 74011 ORDER NOW !!!

SPECIAL

LOCOFILE

£29.95 plus Locoscript II wall chart and highlighter pens

'It's difficult to think of any LocoScripters who wouldn't find LocoFile useful', was Rob Ainsley's conclusion when he previewed Locomotive's new database in issue 26 of 8000 Plus.

The fact is, a database which can be accessed from inside LocoScript II and is fully compatible with LocoMail is a brilliantly logical idea. Locomotives usual panache comes to the fore in the feel of the program too. Essentially an easy to use card index, LocoFile features flexible indexing, fast lookup, efficient use of disk space and is suitable for any PCW (plus three hard disk drives).

Features include:

- Look up or change card details from within LocoScript
- CUT and PASTE to and from LocoScript
- Use up to eight indexes at once - alphabetic or numeric
- Cards up to 99 lines by 80 columns wide
- Up to 50 items per card
- Holds1,000 names and addresses on a 706K disk
- No limit to number of entries on hard disk
- Add or delete fields, change card size at any stage
- Fully two-way compatible with Loco Mail

For all LocoScript 2 users who want an expandable suite of applications, Locomotive is providing the answer without ever having to boot up CP/M! LocoFile provides the classic easy-to-use environment familiar to LocoScript users and has all the hallmarks of a major software launch -Sighs of relief all round!

Order Code 8044 (8256 version)
8048 (9512 version)

FREE!
With your copy of LocoFile
- **LocoScript 2 full colour wall chart**
- **Set of three highlighter pens**

THE 8000 PLUS COLLECTION

1. 8000 plus disc labels Packet of 20 for £1

(when ordered with another product)
Spare labels for your 3" discs in four different colours — yellow, green, red, blue.
Order Code 8013

2. 8000 plus dust covers

3 piece set for 8256/8512 only £11.95
3 piece set for 9512 only £12.95
Protect your PCW with these specially-commissioned three-piece 8000 Plus covers.
Order Code 8005 (8256):
....8006 (9512)

3. Magazine Binders

Store up to 12 issues for just £4.95
A superb gold-embossed green binder. Buy one and watch your collection grow into the definitive library of PCW info.
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4. Highlighter Pens

Three for £1.50
For £1.50 you get green, red and yellow 8000 Plus-stamped pens in a clear plastic wallet.
Order Code 8001

MINI OFFICE PROFESSIONAL PLUS

NEW RELEASE

~~RRP £49.95~~ **OUR Price £42.95**

The latest member to the "Mini-Office" series of products. In addition to the five part product combining database, speadsheet, word-processor, comms and graphics, there is:-

* A 60,000 word spell-checker and 25,000 word thesaurus (available seperately at £24.95)
*The "All in One Busines Computing" book-as sold last month on these pages at £11.95
* A completely re-written spiral-bound maual.

The product proved to be exellent value before but with these exceptional additions it should not be missed. **Order Code 8066**

SPELLING CHECKER AND THESAURUS

~~RRP £24.95~~ OUR PRICE £19.95

Works with the original "Mini Office Professional", Loco-script 1 & 2 and Protext - or any other Ascii file from another word-processor, database or even spreadsheet!
* Using the Collins 60,000 English word dictionary - spell check all your documents.
* Find alternative words by using the Collins 25,000 word Thesaurus.
* Create your own specialist dictionary and find correct spellings by entering the phonetic equivalent (eg. sycologie produces psychology)>
If you own the original "Mini Office Professional" then this is a must for you!!
Order Code 8067

ORDER NOW!!! TEL 045

L OFFERS

DESKING TWO

A complete and mobile workstation slide-away keyboard to save space and most attractive two-tone grey metal construction with non reflective work surfaces and locking castors. Comes complete with adjustable printer shelf ,printer tray and basket.

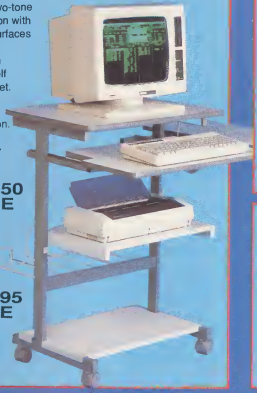
Easy assembly and optional side extension.

With extension **Order Code 8063**

RRP £195.50 OUR PRICE £159.95

Without extension **8064 Order Code**

RRP £169.95 OUR PRICE £139.95



AMGARD SCREEN FILTER

RRP £71.24 OUR PRICE £65.95

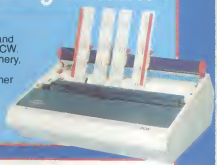
Since a "Health & Safety" feature appeared in another of our publications about a year ago, the Amgard screen filter has been in constant use within our offices here at Future Publishing. Acting as a photographic plate the filter eliminates unnecessary Ultraviolet emissions that cause visual fatigue (or eyestrain). Easy to fit- with FREE anti-static cleaning kit to sharpen your image and readability. Available for the PCW 8256/8512 **Code No 8061** for the PCW 9512 **Code No 8062**

Maxafit form Margin Maker

RRP £34.95 Our Price £29.95

The complete answer to locating and aligning cut-sheet paper on yourPCW. Use confidently your quality stationery, printed forms, letterheads, etc Fits all PCW printers as well as other industry standard printers.

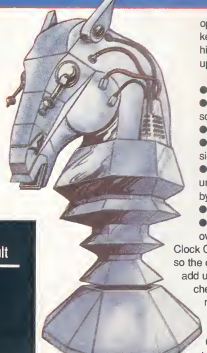
An essential add-on for any PCW owner
Order Code No 8065



CLOCK CHESS '89

Just £17.95 (RRP £19.95)

This latest update is really one of the most incredible chess programs on the market for any computer, as CP Software's fine-tuning enhances the 3D graphics, extends the openings library and cranks up the speed of response. Clock Chess '89 is invariably the winner in computer competitions - indeed UK Chess Champion Mike Basman calls it 'a lively and interesting opponent, an aggressive program that keeps you on your toes', then displays his own killer touch by adding: 'It dices up Colossus Chess nicely'



Clock Chess '89 vs.	Publisher	Hardware	Result
Clock Chess '88	CP Software	PCW	6-4
Cyrus 2 Chess	Amsoft	PCW/CPC	8-2
3D Clock Chess	CP Software	PCW	9-1
Superchess 3.5	CP Software	Spectrum	9-1
Colossus 4 Chess	CDS	PCW/CPC/Spec	9-1
Psi Chess	The Edge	Spectrum	10-0
Grandmaster	Audiogenic	CBM64	10-0
Psion Chess	Psion	Spectrum	10-0
MasterChess	Amsoft	CPC	10-0
MasterChess	Microgen	CPC	10-0
Spectrum Chess	Artic	Spectrum	10-0
Chess - The Turk	OCP	Spectrum	10-0

Features of the game include:

- Recomends your next move
- Displays up to 62 moves to printer or screen
- Program v program option
- Timer forces move on either or both sides
- All rules understood including underpromotion, draw by repetition and by 50 rule move.
- Save/load a game to/from disk
- 44K openings memory - add your own opening moves!

Clock Chess '89 beat Clock Chess '88 6-4, so the differences are discernable and all add up to the most sophisticated 8-bit chess game yet built. It might be worth noting that CP claims that this version beat all other chess programs including the ones from Psion, CDS, Amsoft and OCP by an outrageous 10 games to nil (see box left). So after that there's only one way to find out!

We're delighted to be able to present Clock Chess '89 so early in its career. We are confident that there's at least 12 months - if not a lifetime - left in it yet.

Order Code 8051

458-74011 ORDER NOW

SPECIAL OFFERS

Question: How do you add an extra thousand bits to your 8-bit PCW?

last month for this amazing offer !!!

Answer: Subscribe to 8000 Plus and you're nearly there!

There's no doubt about it. A full 12 issues of 8000 Plus AND a gift pack consisting of *The 8000 Plus Software Collection* (see box below), blank 3 inch disk with proper plastic case and pack of disk labels - all for £17.95 - is incredible value for money. Take out a year's subscription and you are assured of the latest information about what's happening in the PCW market, written in delightful prose by a team which enjoys what it's doing, with editorial covering the whole market from typewriters to programming. No wonder 8000 Plus has one of the highest percentages of postal subscribers of any magazine in the UK.

But it doesn't end there. As soon as you send in your completed Order Form we'll immediately send you your free gift pack - a copy of the first-ever *8000 Plus Software Collection* (RRP £7.95), a blank CF2 disk in a hard plastic case (we had as much trouble as everyone else getting hold of them but we have them now!) worth £2.50 *plus* a packet of 8000 Plus disk labels. Which means a subscription where you get your magazine sent directly to your home address in advance of the street date, plus a gift pack worth over £11.

No other magazine would be so foolish! But at the end of the day, rest assured that you will be getting the best coverage of the PCW market you can find. No one does it better because no one cares as much!

Order Code 81100

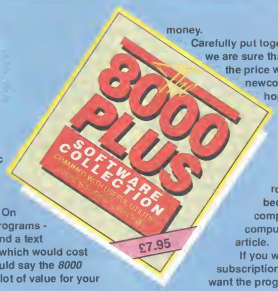
THE 8000 PLUS GIFT PACK

1. **The 8000 Plus Software Collection (RRP £7.95)**
   More than 30 crucial files for your PCW
2. **A blank 3 inch disk (RRP £2.50)**
   Micro Interface disk made in Japan with a hard plastic cover
3. **Set of disk labels (RRP £1.00)**
   Colour-coded 8000 Plus 3 inch disk labels

THE 8000 PLUS SOFTWARE COLLECTION

Just £7.95

The first-ever 8000 Plus software production comes in a single 3 inch disc with includes more than 30 files of listings, Tip-Offs, examples for tutorials (eg Mini Office, spreadsheets) and jokes! And that's just on Side One! On Side Two there are two public domain programs - a full screen editor called New Sweep and a text editor titled VD02, both CP/M programs which would cost several pounds on their own. So you could say the *8000 Plus Software Collection* offers rather a lot of value for your money.



Carefully put together by the 8000 PLus editorial team, we are sure that you will find something to justify the price whether you are a regular reader or a newcomer to the PCW world. Of course, we hope that regular readers will find that many loose ends from articles over the past 12 months are now resolved with the programs here - especially items on Mini Office and other listings. Indeed we intend to continue publishing programs that round off instructional features, because there is that sense of completion which comes with using the computer medium whilst working with the article.

If you would like to order the program with a subscription, quote Order Code 81100. If you just want the program on its own (at a price of £7.95)

ORDER NOW!!! 0458-74011 ORDER NOW

POST SCRIPT

Less than laconian letters from the lugubrious, lucid, and learned

You've listened to us for page after page and now it's our turn to listen to you. Say what you like as long as it isn't too revolting, libellous or dull. If you have a relevant (or irrelevant) question or opinion please send it to *PostScript, 8000 plus, 4 Queen St, Bath, BA1 1EJ.*

No problem, basically

I have had my 8256 for just on a year and it now occupies a fair slice of my waking time. It has been a source of much interest and amusement but from time to time raises my blood pressure.

Can you recommend a book which sets out to teach Basic in a palatable fashion? 8000 Plus has been highly critical of the Mini office Professional Handbook but I quite enjoyed working out its enigmas. The Mallard Basic Handbook is in quite a different league for obscurity.

I have written a few programs in Basic and frequently come up against problems for which the Handbook has not prepared me. I find the book frustrating to read. It is particularly annoying when I type in its program 'fragments' and find they need other bits tacked on to them before they will work. I have certainly learned more from your Listings pages and Basic Tutorials than from the Handbook.

I have looked in the local bookshops without seeing anything suitable. Any suggestions?
Rob Marshall
Isle of Wight

***8000 PLUS** There appears to be no book other than the manual specifically concerning Mallard Basic, however, Mallard Basic is fairly similar in the way it works to Microsoft Basic which has had a variety of books written about it.*

Trying to find out what Basic can do is probably the wrong approach, it can do anything that any other programming language can do. Much better is to set yourself little projects and then work out how to implement your ideas. After all, a man who can learn Mini Office from the manual can do anything.

Bar none

I am doing GCSE computer studies at evening class and using Mallard Basic for my project.

The project involves the storing generating and printing of bar codes on sticky labels so they can be stuck on items of stock. The computer will also store bar code numbers to ensure no duplicate numbers are generated.

My problem is how to print bar codes that can be understood by a bar code reader. If possible could you help.
The exam is in May.
B Smith
Plymouth

***8000 PLUS** I can't give you a listing for this because I don't have the information handy as to how bar codes are formed (that's my excuse and I'm sticking to it), in fact I don't even know which number base the information is in though presumably you do.*

The easy way to approach this is by driving the printer in graphics mode. To tell the printer that the following information is graphics data you send the bytes H1B, H4C, ll, hh, where ll and hh are the number of bytes of graphics data. The number ll is the total number of bytes MOD 256 (the remainder after dividing by 256) while hh is the result of the integer division of the orignal number by 256. Programmers will recognise this as the normal format of internal machine addresses and such like.

You need to set up a two dimensional array of these numbers where the data for each number can be stored. Since you will only be sending 00 or HFF (all pins off or all on) there shouldn't be too much of a problem designing your graphics characters. All this information is in the CP/M manual.

Check this out

I often use the checking program of issue 14 to check my 8000 Plus – listings (for instance DRAWING PACKAGE or ETHERNET). Until issue 25 there were no problems with the checking program but today I run the checker program again and now I got 'mysterious' numbers at the end of every line! I don't know why? Can you help me?
Sorry, my English is bad – I know it!
Detlef Gehring
Hamburg

***8000 PLUS** Nice to hear from readers so far afield and I'm glad you find 8000 Plus so useful. The problem you're having with the checksum program is that you are using an out of date version of the checksum listing – yes, like all software it has been upgraded. The original version failed to check every seventh character.*

To upgrade your existing version you need only alter line:
check%=check%+(y%-32)(i%*

A pin in the neck

I am a 9512 user who would like a dot matrix printer. Before the 8000 owners tell me I should have thought of that in the first place, can I explain.

My wife and I use the PCW for our local church and circuit – keeping records, writing articles, sticky labels, notices and rotas etc. Now we find ourselves editors of a newsletter (how do these things happen?), and are enjoying the wonders of scissors, glue and layouts.

Now a desktop publishing package, plus a few extras, will need a suitable printer. Am I right in thinking that it will have to be a nine pin printer?

There seems to be a number of nice 24 pin printers around as well, and Locomotive will supply the 24 pin printer driver disk. Do I disregard these?

How about an article on 24 pin printers – how they work, and the plus and minus points?
I W Cain
Gillingham

***8000 PLUS** No sooner said than done. We shall be covering the new 24 pin printer drivers for LocoScript from Locomotive software in the next issue although a feature on printers is still some way off.*

As far as DTP work goes there are problems. Clearly DTP packages have to drive the printers in graphics mode to perform their magic, and while this is fairly straightforward for 9 pin printers (only 8 pins are used). With 24 pin pringers the situation is not quite so straightforward.

Although these do have graphic modes mapping eight bits onto 12 vertical pins doesn't work so well. At the moment DTP packages tend not to support 24 pin printers. If I sound cautious it's only because I'm expecting a rush of outraged comment from DTP software houses.

MOD 7+1)
The old version had the +1 outside the brackets. And by the way, your English is infinitely better than my German (even before I tidied it up); the only German word I know is Schneider.

Comm again?

In last month's article, 'The Takeaway Computer', it was implied that the Psion organiser would be able to communicate with the Amstrad PCWs via an RS232 interface. Enthused by this information I set off to buy a Psion XP.

I confirmed the situation with the salesman who reached down a Communications Pack to prove the point when, horror of horrors, Dai the Disk, for it was he, plucked from the package – a 5 1/4 disk.

Is it really possible for the Amstrad 8256 to receive or send data to the Psion. I quizzed a brief acquaintance on the train and he muttered darkly about needing to write programs (ha! ha!) and make up leads (hee! hee!). To me DIY means 'Damage It Yourself', so: who does these things? Can they do it for me? How much will it cost?
Andrew Hall
Oxfordshire

8000 PLUS Yes it is possible and, no it isn't difficult but instead of quizzing a brief aquaintance quiz Psion instead. Contact them on 01 723 9408.

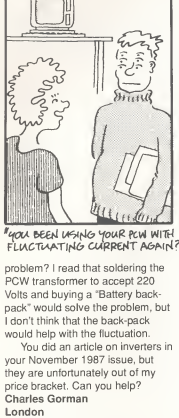
Is it a calc?

Could you find the space to print an article on Supercalc 2 Exec files, and also 'black boxes'? The whole subject is a 'black box' to me!
Mary Turner
Dartmouth

8000 PLUS I'll tell you what; if just thirty people write in and ask for the same thing in the month after this edition appears I'll do it, all right?

Fluctuating French

I have recently been contemplating using my PCW in France. However, I read somewhere that this would be a problem, due to two reasons: the voltage supply in France is only 220 Volts, whereas here it is 240 V. Also, French electricity supplies have a tendency to fluctuate. Do you know what I could use to solve this



problem? I read that soldering the PCW transformer to accept 220 Volts and buying a "Battery back-pack" would solve the problem, but I don't think that the back-pack would help with the fluctuation.

You did an article on inverters in your November 1987 issue, but they are unfortunately out of my price bracket. Can you help?
Charles Gorman
London

8000 PLUS A 220v supply is quite adequate and you'd be surprised at how tolerant the PCW machines are of fluctuating voltage; its all to do with having a switched power supply which I'm not going to discuss here – so you can all breath a sigh of relief.

I submit

Is it possible to create a start-up disc that will automatically run BASIC programs on loading? I have managed to create a disc that will boot up BASIC, using a PROFILE.SUB file, but it ignores BASIC commands to "LOAD" or "RUN" particular files on the disc. Is there any other way of doing this?
Stephen Bamford
Sheffield

8000 PLUS Redirection is the answer. A submit file can provide the parameters for a program by using the redirection symbol. Try the following submit file:

```
Basic
<run "filename
```

Filename is the name of whichever Basic file you wan tto run. Nothing to it really.

Questions

I want to make up a basic form in TEMPLATES with several printed headings on each page, and several empty lines for later filling in under each heading.

When I create a new file for each form and start filling it in with the relevant details how can I do it so that the form headings remain in the same place on the page and are not pushed down as I type in information under the heading above?
Duncan MacInnes
Isle of Skye

8000 PLUS The trick is to create the whole form and only fill in details behind the carriage returns, so it helps if show Symbols (from the [f8] menu) isticked, that way you can see the carriage returns on screen.

Of course if you type in enough to cause the line to wrap then everything will move down regardless. Perhaps it would be better to start off with the headings closed up, type in the lines you need then simply press [ENTER] until the next heading is where you want it.

A bit of Irish flannel

My fiancee recently wanted to buy a computer, and decided, on my advice, to get herself an 8512. She therefore ordered one from Blakely Computer Services, who advertise themselves in the pages of your magazine.

After some delay, the machine did arrive, but unfortunately it wasn't working. Therefore we contacted Blakely and asked for a new machine. It was about here that Blakely became unhelpful. After several promises to collect the machine, one offer to send someone to repair it, and a profound silence, we gave in and asked for our money back.

They agreed straightaway to do so but no money was forthcoming. On 25 November, the managing director, Mr Blakely, was spoken to, and he gave a verbal assurance that he was that very evening putting a cheque into the post. A week later, he gave the same assurance.

Blakely Computers operate from the rather obscure location of Rathfriland in Northern Ireland. This is not an industrial estate as one might suppose, but a little village some few hours drive outside of Belfast. Fortunately, we had a friend who lives in Northern Ireland, and he was able to collect the refund which, in all fairness, Mr Blakely gave without fuss. My friend was however somewhat surprised to find that Blakely Computers operated from a "farmhouse", not a shop.

I am sure that your magazine disclaims responsibility for the service given to customers by its advertisers. No matter. Readers thinking of ordering from this

Unsolicited testimonial

I have been reading 8000 Plus now for almost a year, and although at times I have felt you have been a little too flippant in your replies to readers' queries, I think your magazine is unrivalled in its field. The articles are wide-ranging enough to suit all tastes and levels of experience, the standard of knowledge and technical expertise is very high – and – very important to me, as I am sure is to many of your readers – the quality of the writing is excellent. *(I've cut the next seventeen paragraphs to spare our blushes, tech ed)*

May I make a suggestion for future articles? In view of the increasing number of 9512 users (I know of three all in the same street – not a long one!) might it be possible to do a series on some of the more exotic aspects of using the machine – (some of which might also be of use to 8000 series users who have bought daisy-wheel printers) such as using foreign language printwheels? Whatever you decide to do with 8000 Plus in the coming year, I for one will be quite happy if the quality stays as high, and the puns as awful, as they are at the moment. Keep up the good work!
L Y Skipper (Mrs)
Cleveland

8000 PLUS After reading your letter I came over all euphoric, gosh, I only wish we got more like it. All too often people only write in to complain; it's generally the case that if you hear nothing you've probably got it right. In fact we'd also like to hear from you if something we did (or anyone else did for that matter) amused, impressed or intrigued you.

Foreign language daisy wheels are always on our minds and something is certainly going to be done soon – the moment we get some to review in fact.

company will I think want to know of Blakely's, I fear, not unique service, and act accordingly. You might like to note that we ordered the computer because it had been advertised in 8000 Plus, and at the time didn't think we were taking a risk.
Carl Rayer
Cardiff

8000 PLUS An awful lot of businesses operate from unassuming premises, it's called 'keeping overheads down', so I wouldn't hold working out of a farmhouse against them. However, there is no excuse for not fulfilling contractual obligations.

In general we refuse to take advertisments from companies we find to be trading under false colours of any kind; complaints about those advertising in 8000 Plus don't reflect well on us even though we have no control over anyone elses business.

You will have noticed that Blakely are not in the Febuary edition or this current one, which isn't to say we don't hope they get over their problems soon.

It's academic

It seems the men in white coats which had been so good to Rob and Josephine (Postscript, July) failed to prevent the case passing into the advanced state. Welcome to the club, Rob.

The rate of turnover of 8000 Plus editors seems to be accelerating. Could it be the fumes from the local baths? Or maybe just readers' letters?

Just one more service before you leave, Rob: please find us a successor just as happily zany. He may find it useful to have an update of my 8000 Plus subject index (issue 1-28). I enclose a DD disc. The codes used are shown in format 2 of the file.

To mark the sad occasion of Rob's elevation, the first 20 readers who care to send me a disc and sae will get a free copy of the index. They will need Masterfile 8000 and an 8512/9512 or, at a squeeze, memory-expanded 8256 for the 198k file.

We shall miss you, Rob. Best of luck.
Henning Brondum-Nielsen
Grianan
Killichonan
Rannoch Station
Perthshire PH17 2QW

8000 PLUS Who is this Rob fellow people keep going on about?

Ripping yarns

Whilst reading your Tipoffs section in issue 29 of 8000 Plus I came across a wee gem of info concerning the title screen of The Desktop Publisher, by one Carwyn Cook. I was most impressed with this stroke of pure genius, and I immediately felt that the price of £1.50 was well worth it just for this tip alone. There was, however, one hair in the clear soup of my contention. Half of his tip-off would appear to be missing, as also was some of another letter above it. I was greatly saddened.

Though I am unaccustomed to writing to magazines and whingeing whenever they lop off small pieces of text, I was particularly moved to put printer to paper on this occasion, as I was so distressed to see such pearls of wisdom displayed in this unusual manner.
Mr Carwyn Cook
Pontypridd

8000 PLUS Your text got the chop? The reason for enough, and I hope that explains it; all right?

Maltese problem

I have encountered some problems which I would be more than just honoured if you would give me a satisfactory answer to all these questions the soonest possible, perhaps on one of your future issues of 8000 Plus.

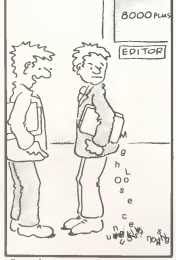
Is there a service manual available for the Amstrad PCW 8256/8512 and if there is one can you be so kind as to give me the price and address where I can obtain it? I believe it contains information I have been seeking for some time now. Can I have the address of CPC please?

Would you be so kind as to indicate whether foreign countries such as Italy, Spain, Germany, France, the United States etc, have issued any software of their own for the above computer and if so, from where can I obtain samples?

Thanking you beforehand for your precious and much appreciated help and cooperation, I await your answering letter as soon as possible, hoping that the answers I seek will be in it and that the coming issues of the magazine will reach me in the best condition and in due time.
Eugenio Clappara
Malta

8000 PLUS I'm always amazed at just how many international 8000 Plus readers there are; I never seem to get more than half a mile from the Future offices myself. What about some exotic postcards to brighten our dingy office with?

As you know, CPC are the company that actually handle Amstrad spares. They can be reached at PO Box 158, Preston, Lancs, PR1 1XJ. Service manuals for the 8256 (and 8512) are £8; those for the 9512 are £13.33. Allow £2.88 extra for postage and handling in the UK but from Malta? You'll have to enquire at the post office.



"YOU'VE BEEN CARELESS WITH YOUR HEADINGS AGAIN..."

Characteristic problem

Concerning the letter "The moving hand writes" (8000 Plus, February), the problem seems very much like a dirty keyboard membrane as described in December issue. Despite the fact that the keyboard appears to be quite new, it is worth considering this possibility since it is unlikely that computers are assembled in a truly clean environment.

If it is suspected that "spiking" is the cause of the malfunction then the following method may eliminate the problem.

Most houses have mains wiring in separate loops or rings (ring mains). Usually there is a separate ring for upstairs and downstairs circuits both for power and lighting.

If it is suspected that an intermittent source such as CH or 'fridge is causing the spike, it is worth trying the computer on a different ring from the offending appliance, either by moving the computer upstairs/downstairs or by using a long mains connecting lead to plug into a different ring.

In the case quoted, it is worth pointing out that the various bits of CH (pump, boiler etc) are usually wired into the same ring main even though boiler and pump may be on different floors of the house.
G A Doyle
Wolverhampton

8000 PLUS If these suggestions fail to solve the problem then turning off your power at the mains and fitting a nice big ex-military deisel generator in the back garden will suffice. Installing double glazing will keep the noise outside where only the neighbours will be irritated by it.

No comment

Whilst I have noted with amusement your magazine's various comments and quizzes concerning the speed and quality of Amstrad's customer service, I must, in true British tradition, speak in defence of the underdog.

Having returned a CP/M disk, apparently totally inoperable, I was both delighted and impressed to receive a replacement by return, and without charge. (The more so, as it turned out to be finger trouble in the first place!!)

Good magazine, nice style, keep the games out please!!
Paul Sillitoe
South Wirral

8000 PLUS I have trouble with my fingers too. The best solution is to have them surgically removed after which all typing errors are completely eliminated.

As for games I don't know what you mean, everyone knows that the PCW isn't a games machine.

Corruption on the line

Your advice to parents at the end of the article on educational programs not to encourage their children to throw away their books is well taken. Being able to get information from books and whatever replaces them, and to read them critically remains an essential skill, even for the grown up who only reads computer manuals.

'Morse's' electric telegraph was not the first that got built, and it was not Morses's anyway, but Vail's. The first built was the needle telegraph of Wheatstone and Cooke (patent of 1837) between Paddington and West Drayton in 1838, and there were lines from London to Norwich and Southampton by 1844. The Wheatstone system was

the basis of much railway signalling until well into this century. Morse's patent was granted in 1840, and his first line only built in 1843-4. It seems that most of the key features of 'his' system are due to Vail and others. There's a brief account in Derry and Williams A Short History of Technology (pp 624-626).
R N D Martin
London

8000 PLUS I'm happy to have the record set straight but would plead that I didn't come across the name of Vail anywhere when researching the article.

The problem is one of information overload. It can be difficult to find a fact even knowing it exists and failing a reference to it elsewhere it will not be chased to ground. None of this is offered as an excuse, merely an explanation.

Spare part surgery

I am afraid that this time I have a tale of woe to report.

A few months ago my Amstrad 8512 did something rather weird. I had been compiling a catalogue of recorded music and had been storing information on the number keys, or blocks. When I had finished this I replaced the B drive disc with a disk containing chapters of a book, pressed the usual F7 disc change and began work. Later I was checking a chapter in group 1 and discovered that the last two pages had been erased and in their place was all the information I had stored in the blocks. The same had happened to all chapters stored in group 1.

Fortunately I had a copy so disaster was averted.

At a later date I was doing some more editing and the whole thing locked up. The cursor disappeared and no keys would have any effect. Switching off and re-starting brought everything back but only to lock up again half way through the first page.

I took the whole machine back to Currys who promptly sent it back to their repair centre, I think they said in Doncaster. Each week since that date, starting with 11 November 1988, they have phoned Amstrad to chase up the printed circuit board necessary to put my computer right but each time they are told "Sorry, out of stock".

If there is anything you can do to help me get my Amstrad back I would be very grateful.
Thanking you in anticipation.
R S Chamberlain
Leeds

8000 PLUS I'm afraid there's nothing I can do to help you get the machine back although I did contact Amstrad for news of their spares supply situation.

Amstrad say that there is no supply problem, in fact for a change someone specific said it. If you are having a problem with a dealer then Mr S Angel of Amstrad would like to hear about about it. Write to him c/o Amstrad PLC, Brentwood House, 169 Kings Road, Brentwood, Essex, CN14 4EF. Such a pleasant change from 'No comment'

Something for nothing

Re: 'Damage Appeal', Postscript p87, Feb 89
Your comment echoes my own sentiments exactly. But it's all very well for Dave Smith. My circumstances being what they are, if I did the same, sooner or later a certain Government department would peremptorily demand like sums to be paid from me to them.
George Bridge
Sale

8000 PLUS Right, no cash with your damaged discs folks, just an SAE and pre-emptive thanks.

Power down

In response to the letter, by Diana Lines, published in February's Post Script, I would like to throw in my twopenneth worth.

I too have had the problem of spooky writing on my screen, even though I had a power surge protector plug fitted to my PCW, I eventually traced the fault to the power surge protector itself.

Somewhere inside the connector there was a shorting circuit which was in itself causing a spike in my machine and causing the ghostly appearance of letters on the screen, removal of the power surge protector and plugging directly into the mains, cured the problem.

Although I plugged directly into the mains supply that time, I did not condemn power surge protectors, it just allowed me to continue working until I was able to obtain another one.

The moral of the story is, although you have a power surge protector, check it regularly because these too can break down and produce nasty harmful spikes.

I hope this letter will help the 8000 Plus staff solve some of their unexplained electronic smog.
Tim Moore
Leicester

8000 PLUS Like the editorial office of every computer magazine I've ever seen our power supplies tend to consist of extension leads with tottering mounds of double and triple connectors hanging off them (I know we shouldn't do it but so many things have to be plugged in and out so often that nothing else will work) which might account for our occasional problem.

As for a spike suppressor which itself causes spikes – what can I say that I can also print?

Copy correction

The inter-line spacing or leading in your article on typesetting (8000 Plus, February 1989) is not 10 points but 2 points. The body size, or overall line depth, is 10 points (8-point text plus 2-point leading).

A type font does not cover "a complete range of point sizes". Each font of a commercial typeface is size-specific as well as style-specific.

Some desktop publishing packages confuse the issue by providing the means to produce low-definition enlargements or reductions of a font's true design size. Companies which supply a separate set of high-definition matrices for each point size are implementing a recognised industry standard, not offering "less for more".

Users of the Desktop Publisher program will find a clear explanation of the basic typesetting conventions in my Designer Stubble software (released in autumn 1987 but still not listed in your magazine's "Good Software Guide").
John Evans
Bath

8000 PLUS As Mr Evans pointed out on the phone he came to typesetting via the more traditional hot metal. People coming to it via desk top publishing will find things a bit different. Quark Express (which we use to set 8000 Plus insists it is 8 point type on 10 point leading. What can I say? Yet another standard that no longer is.

Cutting remarks

Am I drunk or have I been spending too many hours in front of my PCW? When I received my February issue of 8000 Plus, I turned straight to the Tipoffs page as usual and there to my surprise were a couple of gems.

'Seek And Ye Shall Wait', from Adrian Wilkins, I'm sure wasn't a figment of my tired eyesight, neither was 'Artistic Licence', by Carwyn Cook.

Both of these letters made about as much sense as a chinese dictionary.

If readers receive £10 for each letter published, I would like you to split this letter into 3 and publish it under separate headings....That will be £30.00. THANK YOU!
Tim Moore
Leicester

8000 PLUS We don't pay anything for readers letters – indeed we're being extremely generous in publishing them at all considering that so many of you merely want to whinge. As for the two letters you mentioned, the problem was

Right of Reply

In reply to the letter from Dianna Lines entitled - 'The Moving Hand Writes'; this is a problem I experienced on two machines used at home. The remedy was to line the airing cupboard wall and floor with thick baking foil, and a double layer was placed between the office (bedroom) floor and carpet.

This proved sufficient to shield the computers from radio frequency interference.

At work, where there was a similar problem, we built small chipboard booths lined with foil.

Regarding the letter from George Bridges- 'Damage Appeal' - in the same issue, a friend of mine wanted to do the same thing.

He made his own damaged discs by switching off while copying files to the disc, holding the disc near a magnet or the television tube, sticking pins through them and scratching the surface. These are all common fauts which arise through normal use.
J J Gibbs
Brighton

It's quite clear that nothing is too much trouble for the average PCW user, though your definition of normal disc use rather worries me.

In fact despite mistreating our discs horribly in the office we've only had two errors this year.

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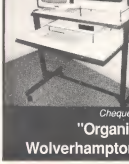

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Who says we're not quick on the out-take?

April shower

Since 8000 Plus is as upmarket a publication as you'll meet outside a doctors waiting room we too take serious things lightly and light things seriously. Thus this prestigious organ's decision to celebrate All Fools Day.

Best suggestion so far is a cover mount consisting of a plastic bag labelled Missing Address Marks complete with half a page of instructions on their use.

Unfortunately the Technical Editor has been unable to locate a supply of these and the idea has had to be dropped. We await other, less sensible, suggestions.

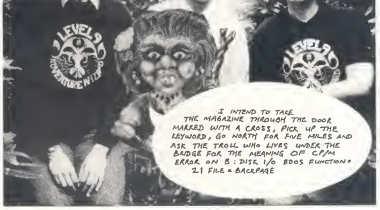
What computer show?

The big yearly business computer splurge is the Which Computer? Show at the National Exhibition Centre, Birmingham. You didn't know? That's difficult to believe. At the last count nine separate, individually hand wrapped, press releases for the show have arrived on the desk (we have to share). Is this a record? Do they think we didn't believe them the first eight times? And yes, we shall be going.

Thousands apply for prestigious editorship

The torrent of applications for the editorship of 8000 Plus shows no signs of abating. Bath Cattle Market has been pressed into service as a holding area while day and night interviews take place but it's beginnning to look as though no decision will be possible before 1992.

One of the recent applicants showed up with her own team of replacement journalists and much muttering about the lack of eight colour pages devoted to adventures; however, attempts to get specific information on her editorial policy elicited only 'Gno comment'.



Slipping into the soaps

You think the Amstrad PCWs are only sold through Dixons and other approved suppliers don't you? But selling in these hectic times is a wider ranging affair than that. Product placement is the name of the game and these days it isn't just Coca Cola who are doing it.

Although Amstrad have been unable to get a PCW into anything as international as a Superman film – Lex Luthor plotting the path of stolen missiles using GSX? – they have managed a few humbler, but perhaps more effective, coups.

Since the Rev D W Clement's observation that Woolworths were doing as much to advertise the PCW as Amstrad, we've had a host of sightings. The most comprehensive list – and certainly the keenest correspondence on the subject – was from J D Pritchard.

He notes that a Tarzan clone is seen swinging over a 9512 night after night in the advertisment put out by a certain high street employment agency; that a budding entrepreneur in Grange Hill uses one for an unspecified home service; that Amos Brearly, Landlord of The Woolpack in Emmerdale Farm appears to have been so taken with a PCW bought for Henry Wilks that he's taken it over.

But surely the award for most innovative piece of product placement has to go to whoever thought of getting the PCW on radio. Yes, it's true, there is apparently an Amstrad occupying pride of place on Jill Archer's desk, even if it does belong to her husband Phil.

When this organ enquired about Amstrad's product placement policy it was told 'People go out and buy the machines and use them'. More succinctly than which the situation cannot be put.

NEXT MONTH

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PCW people doing what comes naturally

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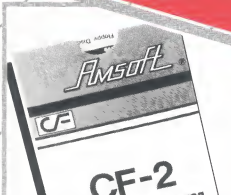

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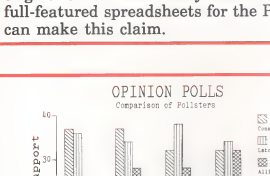
Cracker 2 continues to evolve as a 'live' product under current development by its original author: few if any other full-featured spreadsheets for the PCW can make this claim.



Example plot from a PCW printer

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